

WIREIMAGE (TM)

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SUMMARY

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ALIGNMENTS

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Accession	Definition	LOCUS	Result
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529	CCCCCTCCTCGGCACTGTGTGGGGTCTCGCTGAGCGTTGAGAAAAGAAAGAAATATCTCA	588	
563	ccccgcgcgtgcgtgtgtggtcgtcgtgcattggaagaaagagatctcca	622	
589	TTGACGAAAGCGCCAGGGGAGCGGCAAGATGCATATACCTCTGTACTTCATCATCGGC	648	
623	tgcaggggaagccgaggggaatggaataatgcatatacaacctctgtaacttcatcgtgc	682	
649	CTGTGACACCCCTGTAGCACACCCAGAAAGAGCCTGACACACAGTACAGATGAGGCT	708	
683	cctggagacacctgtgtgtccaccacgaagaagagcctgaaccacaggtacacgaatcgtc	742	
709	GGAGTGCACAGATCACGGCTCTCCCATGATCCGCTGCTACTATCTCTCCCGACAGT	768	
743	gtgagttgaagatcacctgattgcccatgattccatctctctctccgcagagt	802	
769	GCCTTGATGAGACAGGGGTGACAGAGAAGATCATCAAGGAGCAGCAGGCAAGTCTTCT	828	
803	gacctggaatggaacccgggtccagggagaagaatacaacggacacagagccaagtcttcg	862	
829	CTGTGATCAGAGAGATGACGGCTCTCTGTGCTGTGCTACCGCGCGCGGCCCCCAAC	888	
863	cctgatacaagaagagcagcagcctctcgtcgtgtacgcgagcagacaccccccaagc	922	
889	AGGACTTCTCTGCATCTCAGAGACCCATTAAGACAGGCGCTCCACGCCCTTGTGCGCAATGC	948	
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982	-----acagttgccaaagattcagaactgtctccagctccgacatccctctctggaacagca	1037	
1009	TGAATATAA 1016		
1038	tgaatataa 1045		
3	LOCUS S48568 1062 bp mRNA PRI 25-MAY-1993		
DEFINITION	tissue inhibitor of metalloproteinase 2 [human, mRNA, 1062 nt].		
ACCESSION	S48568		
VERSION	9298201		
KEYWORDS	human.		
ORGANISM	Homo sapiens		
REFERENCE	Eukaryotes: mitochondria eukaryotes; Metazoa: Chordata; Vertebrata: Eutheria; Primates: Catarrhini; Homnidae; Homo. 1 (bases 1 to 1062)		
ADDITIONAL	Liotta, L.A., Stetler-Stevenson, W. and Steeg, P.S. Metastasis suppressor genes Important Advances in Oncology, 85-100 (1991)		
JOURNAL	91331585		
MEDLINE	GenBank staff at the National Library of Medicine created this entry [NCBI gisbseq 48568] from the original journal article. This sequence comes from 6-7.		
REMARK	Location/Qualifiers		
FEATURES	1..1062		
SOURCE	/organism="Homo sapiens"		
gene	/db_xref="taxon:9606"		
CDS	1..1062		
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	/note="This sequence comes from 6-7; TIMP-2"		
	/codon_start=1		
	/product="tissue inhibitor of metalloproteinase 2"		
	/db_xref="PDB:9298202"		

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Matches 706;	Conservative	0;	Mismatches 77;	Indels 5;	Gaps 1;
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Db	245	CCGCGCCGCCCAAGCCCCCGGGCCCGGCATGGGGGCGCGCGCCCGCCAGCCCTGCGGCTGGCGC	304		
Qy	263		322		
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Qy	323		382		
Db	365	TGCAACCGCCCAACAGCGCGTTTTCGAATGCAAGATGTGTATCTCAGGGCCAAAGCGGTACGTG	424		
Qy	383		442		
Db	425	AGAAAGAGTGTGACTCTGTGAAAGCACTTTATGGCAACCCCTTCAAGAGATCCAGTATG	484		
Qy	443		502		
Db	485	AGATCAACACAGATAAGATGTTCAAAAGGCGCTCGAAGAGAGATATAGAGTTATCTACACGG	544		
Qy	503		562		
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Qy	563		622		
Db	605	TTGCAAGAAAGGCGAGGGGGGAGCGCAAGATCACATCAACCTGTGACTCATCATGTCG	664		
Qy	623		682		
Db	665	CCTGGAGACACCTTGAGACACACCCAGAAAGAAAGCCTGAAACCAAGGTACAGATGGGCT	724		
Qy	683		742		
Db	725	GGAGGTGCAAGATCAACGGCGCTGCCCATGATCCCGTGTACATCTCTCTCCCGGAGAGCT	784		
Qy	743		802		
Db	765	GGCTCTGATGAGACTGGGTGCACAGAGAAATAATCAACGGGCAACCGGCAAGTTTGTG	844		
Qy	803		862		
Db	845	CCTGATCAAGAGAGTGAAGCGGCTCCTGTGCTGAGTGAACGGCGGCGGCGCCGCCCAACG	904		
Qy	863		922		
Db	905	AGAGTTTCTCACATCGAGAGCCATAAGACAGGCGCTCCCAACGCCCTTGAGCCAACTCG	964		
Qy	923		981		
Db	965	AAAAAAGCGCTCCAAAGGTTTTCGACTGGTTCGACGCTTGACATCCCTCTCTGGAAACAGCA	1024		
Qy	982		1037		
Db	1025	NGAATAAA 1032			
Qy	1038				
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RESULT	4	HUMTIMP2	1062 bp	mRNA	PRI
LOCUS					14-JAN-1995
DEFINITION	Human metalloproteinase-2 inhibitor (TIMP-2) mRNA, complete cds.				

[illegible]

QY	623	ttgcagggaaagccggagggatgycgaatatgcatatgcaaccctctggtatcttcaatcgtgc	682
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QY	743	gtgagtgccaagatcaaccctgagtcgcccatgattcccatgctacatctcttccggagagt	802
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QY	803	gaccttgatgagacttgggttcaacgagaagaagaacatcaacggaacccggacgaattctctg	862
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QY	863	ccctgcatcaagagaagagagagtgctctgctgctcgtgaacgcygagacagaccccccaagc	922
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QY	923	agaggtttctcgacatcgagagaccgctlaagcagycgcaaccagagatctctcgtggccaattg	981
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Db	1025	TGAATAAA	1032
QY	1038	tgaataaa	1045

LOCUS	5	1007 bp	mRNA	ROD	12-MAR-1997
DEFINITION	TIMP-2-testicular tissue inhibitor of metalloproteases-2 [rats, Sprague-Dawley, testes, mRNA, 1007 nt].				
ACCESSION	S82718				
NID	91881813				
KEYWORDS	Rattus sp. testis Sprague-Dawley.				
SOURCE	Rattus sp.				
ORGANISM	Eukaryota; Mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.				
REFERENCE	1. (bases 1 to 1007)				
AUTHORS	Grima, V., Calcaagno, K. and Cheng, C. Y.				
TITLE	Purification, cDNA cloning, and developmental changes in the steady-state mRNA level of rat testicular tissue inhibitor of metalloproteases-2 (TIMP-2)				
JOURNAL	J. Androl. 17 (3), 263-275 (1996)				
MEDLINE	96384329				
REMARK	Genbank staff at the National Library of Medicine created this entry [NCBI g1bseq 179018] from the original journal article. This sequence comes from fig. 2A.				
FEATURES	Location/Qualifiers				
source	1..1007				
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	/note="testicular tissue inhibitor of metalloproteases-2; this sequence comes from fig. 2A"				
CDS	/codon_start=1				
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QY	881	acggctctgcgcccggatccggagagacaccccccaagcagagattcttgcacatcg	940
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QY	941	aggaccctgaagcagcagccacag-gactccctggggccaattgataa-gtgcacaagagttc	998
Db	942	AGACTGCTCGACGCTTTGCATCCCTCTCGAAGACAGATGAATAA	988
QY	999	agactgcctcagctccgacatccctcctgcagcacagatgaataaa	1045
RESULT LOCUS	7 RNU14526	969 bp mRNA	ROD 21-SEP-1994
INITIATION	Rattus norvegicus tissue inhibitor of metalloproteinases-2 mRNA (TIMP-2) mRNA, complete cds.		
ACCESSION	U14526		
NID	9540204		
KEYWORDS	Norway rat.		
SOURCE	Rattus norvegicus		
ORGANISM	Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sclurognathi; Myomorpha; Muridae; Murinae; Rattus.		
REFERENCE	1. (bases 1 to 969)		
AUTHORS	Cook,T.F., Burke,J.S., Bergman,K.D., Quinn,C.O., Jeffrey,J.J. and Partridge,N.C.		
TITLE	Cloning and regulation of rat tissue inhibitor of metalloproteinases-2 in osteoblastic cells		
JOURNAL	Arch. Biochem. Biophys. 311 (2), 313-320 (1994)		
MEDLINE	94263207		
REFERENCE	2. (bases 1 to 969)		
AUTHORS	Partridge,N.C.		
TITLE	Direct Submision		
JOURNAL	Submitted (08-SEP-1994) N.C. Partridge, Saint Louis University School of Medicine, Department of Pharm. and Physiol. Sci., 1402 South Grand, St. Louis, MO 63104, USA		
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QY	401	tttgcatactgcagacatagtagtgcaggccaaagacagacataaagaagaggtgcacttg	460
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QY	761	gatgcctcatatccatctgcatcacctctctccgcgagctgctcttgatgcagctg	820
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QY	881	aagcgtcctgctgctgtgtacccggtgagcagaccccccaagcagagtttctgacatcg	940
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QY	941	agagaccgtaagcagcagccacagcagcctcttcgtggcatttgaca-gtgcacagagtlca	999
Db	921	GACGAGTCCACGTTTGACATCCCTCTCTGGAACAGAGATCAATPAA	966
QY	1000	gactggttcagctcgcagatcccttctctgtaacacagatgaataa	1045
RESULT	8		
LOCUS	MUSTIMP2A	1695 bp	MRNA
DEFINITION			Mouse tissue inhibitor (type 2) of metalloproteinases (TIMP-2)
ACCESSION			U02051
KEYWORDS			extracellular protein; matrix metalloproteinase inhibitor; tissue inhibitor of metalloproteinase.
SOURCE			Mus musculus (strain BALB/c, sub-species domesticus) (library: lambda gcl1) embryo cDNA to mRNA.
ORGANISM			Mus musculus
REFERENCE			Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae; Murinae; Mus.
AUTHORS			1. (bases 1 to 1695) Shimizu S., Malik, K., Sejima, H., Kishi, J., Hayakawa, T. and Kotani, O.
TITLE			cDNA sequence of mouse TIMP-2

<div>JOURNAL Unpublished (1991)</div>					
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D	269 CCTGCTGTGGCGCCCGCGACGCTGACTGCTCCCGGTGCAACCGAAGCGCT	328			
O					
Y	341 GGAAGCTGCTCCCGCGCGACGCTGAGCTCCCGGTGCAACCGAAGCGCT	400			
D	329 TTTGCATGACAGCTTAGTGATCAAGCGCAAGCAAGTGAAGAAGTGTCCG	388			
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D	509 GCGGGGTCTCGCTGGACGCTTGGAGAAAAGAGAGATATATTGTCAGGAAAAGCAAG	568			
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Y	581 GTGGGTCTCGCTGGACGCTTGGAGAAAAGAGAGATATATTGTCAGGAAAAGCAAG	640			
D	569 GAGATGCAAGATGACATTAACCTCTGAGCTTCAATTGTGCTCGGACAGCTTAGCA	628			
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Y	641 GGAATGCAAGATGACATTAACCTCTGAGCTTCAATTGTGCTCGGACAGCTTAGCA	700			
D	629 TCACCCAAGAAAGAGCTTGAAACACAGTACCAGATGGGCTGTAGTCAAAGATCACTC	688			
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D	689 GCCTGCCCAGATGATCCCTCTCATATCTCTCCCGGATAGAGGCTCTGATGAGACTGG	748			
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	D	b	809	ATGTTCTTGCGCGCGGTACC CGCGGGGCGGACGCCCCCCAGACAAGATTTCTTGACATCG	868	
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	D	b	869	AGGACCCGTGAAGAGCTGTGACAGAGCCCCTGTGCGCAATTGAAAAGCCTCTGAGGCTTA	928	
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RESULT LOCUS	9	MMTIMP2	1714 bp	RNA	ROD	30-JUN-1993
DEFINITION	M.musculus TIMP-2 mRNA for tissue inhibitor of metalloproteinases,					
ACCESSION	Type 2.					
NID	X62622 S37984					
KEYWORDS	inhibitor of matrix metalloproteinases; TIMP-2 gene; tissue inhibitor of metalloproteinases, Type 2.					
SOURCE ORGANISM	mus musculus Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae; Murinae; Mus. Shimizu,S. 1 (bases 1 to 1714)					
REFERENCE AUTHORS TITLE JOURNAL	Direct Submission Submitted (14-OCT-1991) S. Shimizu, Pathophysiology Unit, Aichi Cancer Center Research Institute, 1-1 Kanokoden, Chikusa-ku, Nagoya 464, JAPAN 2 (bases 1 to 1714) Shimizu,S., Malik,K., Sejima,H., Kishi,J., Hayakawa,T. and Koizumi,O. Cloning and sequencing of the cDNA encoding a mouse tissue inhibitor of metalloproteinase-2 Gene 114 (2), 291-292 (1992) 92290292					
FEATURES SOURCE	Location/Qualifiers 1..1714 /organism="Mus musculus" /strain="BALB/c" /db_xref="taxon:10090" /cell_line="embryonic fibroblast (3T3)" /clone_id="gf11" 227..889 /gene="mouse TIMP-2" 227..889 /gene="mouse TIMP-2" /codon_start=1 /product="tissue inhibitor of metalloproteinases, Type 2"					
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polyasignalBASE COUNT	polya_signal 347 a 520 G 474 g 373 t					

[illegible]

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Db	124	GCAATCGACAGCGTGTAGTATCAGAGCCCAAGACAGTACGAGCAAGAGAGTGGATTCCGGGA	183
Qy	404	gcacatgcagacatagtagtcatcagggcccaagcagtcacataaagaagagtgtagctctgca	463
Db	184	ATGACATCTATNGGCAACCCCATCAAGAGGATTACGTATGTGATCTACACATAAATATGT	243
Qy	464	acgacatctacggaaccccccaagcggatctcagta tgcatacaagcaataaagatgt	523
Db	244	TCAAAGGACCTGACAAAGAACATCATCAGTGTATCTATCAACAGGCCCTCTCTTCACAGTGGC	303
Qy	524	tcaagggaccgcgacacagagacatagagtattatctacacagccccgcgcgcgtgtgtg	583
Db	304	GGGTCTCGCTGGACGTTTGGAGGAAGAAGAGATATCTAATTGACAGAAAGGACGAGAGAG	363
Qy	584	gggtctcgtgacatctggaaggaagaagagatctcatctctgacgggaagccgaaggga	643
Db	364	ATGGCAAGATCCACATTAACCTCTGTACTTTCATCTGTGCGCTCGGTGGGAAACGCTTAGCATCA	423
Qy	644	atggcaatactacatacaacctctgtactctacatcgccctgggaacacctgagtgca	703
Db	424	CCCAAGAAAGAGCCTGAGACACACAGTACAGATGGGCTGTGATGCAATCATCTGCT	483
Qy	704	ccccgaagaagaagcctgacacacagcgtacacagatggcctgtgagtgaaatacctcgat	763
Db	484	GTCCCATGATCCCTTGCTTACTATCTCTCCCGGATGAGTGCCTCTGTGATGAGTGGGTCA	543
Qy	764	gcccatagtatccatgtacatacctctcctccgagcgatgctctgtagtgcattggttca	823
Db	544	CAGAGAAGAGATCAATNGGCGACACAGGCAAGTCTTCGGCTCGATGAGAGAAGTATG	603
Qy	824	cgaagaagaacatcaacaggaacacaggaagtccttcgctgcatcaagaagcgagc	883
Db	604	GTTCTTGCGCTGTGTACCGCGGGGCGGACACCCCAAGCAAGATTCTTGATCTGACG	663
Qy	884	gtctctgacctgtgtacccggagcagacaccccccaagcgagttcttgacctgag	943
Db	664	ACCCTAAGACAGG 676	
Qy	944	accctgaagcag 956	
RESULT	12		
LOCUS			
CGRMAP	597 bp	RNA	ROD
DEFINITION	C. longicaudatus mRNA for tissue inhibitor of metaro proteinase.		
ACCESSION	X75924		
NID	9414876		
KEYWORDS	Tissue inhibitor of metaro proteinase.		
SOURCE	Long-tailed hamster.		
ORGANISM	Cricetus longicaudatus		
REFERENCE	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorphia; Muridae; Cricetinae; Cricetulus.		
AUTHORS	Suzuki, Y.		
REFERENCE	Unpublished		
TITLE	2 (bases 1 to 597)		
JOURNAL	Suzuki, Y.		
FEATURES	Direct Submission		
source	Submitted (02-NOV-1993) Y. Suzuki, Suntory Pharm-Tech Center, 370-05 Azaaya 2716, Chiyoda-machi, Ohra-gun, Gunma, JAPAN		
	Location/Qualifiers		
	1. 597		
	/organism="Cricetus longicaudatus"		
	/db_xref="taxon:10030"		
	/clone_lib="chinese hamster ovary"		
	/clone="K1"		
	/cell_type="ovary"		


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    U44384:195..319,546..743)
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    /function="inhibitor of matrix metalloproteinases
    activities"
    /codon_start=1
    /evidence=experimental
    /product="tissue inhibitor of metalloproteinases-2"
    /db_xref="PID:g1517893"
    /translation="NGAAARTLRALGLPLLRPADACSCSPVHPQAFQCNADVIR
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    GKREKYLIAEGDGMHTTLCDFIYPMPTLSTOKSLNHRYOMGCECKITRCPMI
    PCYISSPDECLMADWTYKRNINQHAKFRACIRKSDSCAWRYGAAPPKQEFLLIDP"

<1..545
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    /number=4
    546..853
    /gene="TIMP-2"
    /number=5
    744..853
    /gene="TIMP-2"
    837..842
    /gene="TIMP-2"
    275 a 432 c 360 g 300 t
    ORIGIN

Query Match 19.7%; Score 206; DB 28; Length 1367;
Best Local Similarity 88.6%; Pred. No. 2,67e-128;
Matches 265; Conservative 0; Mismatches 29; Indels 5; Gaps 1;

Db 544 AGATCAGCGCGCTGCCCATATGTCCTGCTACATCTCTCCCGGAGAGTGCTTGA 603
    ||||| || ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 752 agatcactcgatgcccatatgccatgctacatctctctccgacgagtgctctgga 811
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 604 TGGACTGGTCACAGAGAGAAATCAACGAGGACACGAGGCAAGTTCTGCGCTGCATCA 663
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 812 tggactggtcagcaggaagaacatcaagcagcagcagcagcagctctcgctcgca 871
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 664 AGAGAACTGACGGCTCTGCTGTGTGTACCGCGGCGGCGGCCCCCAAGCAGAGATTTC 723
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 872 agagaagcagcagcgtctgctgctgctgctgctgctgctgctgctgctgctgct 931
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

724 TCGACATCGAGGACCCATAAGCAGGCTCCACGCCCTGTGGCCAACTGCACAAAAAGC 783
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
-f 932 tggacatcgagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 986
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Db 784 CTCCAAGGGTTTGCAGCTGGTCCAGCTGCATCCCTTCCGGAACAGCATGAATAA 842
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 987 gtccaagagttcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 1045
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Search completed: Mon May 4 12:33:37 1998
 Job time : 2976 secs.

Query Match 100.0%; Score 1045; DB 1; Length 1045;
 Best Local Similarity 100.0%; Pred. No. 0.00e+00;
 Matches 1045; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 attcggcttctatgagagcactcggagccaggtctcggcgccgacactcgtctgc 60
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QY 1 attcggcttctatgagagcactcggagccaggtctcggcgccgacactcgtctgc 60
   |||||||
Db 61 cgcgcccaagcagactctcgtctcggcgccgagccgcccgcctcctcgtctgca 120
   |||||||
QY 61 cgcgcccaagcagactctcgtctcggcgccgagccgcccgcctcctcgtctgca 120
   |||||||
Db 121 ccccgagactagagcccaagaagtgtgtgtgagagtgagggcgagagagcgagc 180
   |||||||
QY 121 ccccgagactagagcccaagaagtgtgtgtgagagtgagggcgagagagcgagc 180
   |||||||
Db 181 cccggagagtgccgttccagaccagcgccggcgagagagggagcgcccgagccca 240
   |||||||
QY 181 cccggagagtgccgttccagaccagcgccggcgagagagggagcgcccgagccca 240
   |||||||
Db 241 ggcggcgagcagtagcccgagctcggagcccccgcctcgcgcgcagggcgccgc 300
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QY 241 ggcggcgagcagtagcccgagctcggagcccccgcctcgcgcgcagggcgccgc 300
   |||||||
Db 301 gcccgagcctcgccgctcgctctcgtctcgtctgtgtgtgtgtgtgtgtgtgtgt 360
   |||||||
QY 301 gcccgagcctcgccgctcgctctcgtctcgtctgtgtgtgtgtgtgtgtgtgtgt 360
   |||||||
Db 361 gacgctcgagcgtctcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 420
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QY 361 gacgctcgagcgtctcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 420
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Db 421 atcaggggccaaagcagtcataaagaagagtgtagctctgtgtgtgtgtgtgtgtgtgt 480
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QY 421 atcaggggccaaagcagtcataaagaagagtgtagctctgtgtgtgtgtgtgtgtgt 480
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Db 481 cccatcaagcagagtcagtagtagatcaagagataaagatttcaagagagactgtcag 540
   |||||||
QY 481 cccatcaagcagagtcagtagtagatcaagagataaagatttcaagagagactgtcag 540
   |||||||
Db 541 gacatagagttatctcaacagcccccgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 600
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QY 541 gacatagagttatctcaacagcccccgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc 600
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Db 601 gggaggaagaagagtagtctcatttgaggaggaagccgagagggagatgtgcatatc 660
   |||||||
QY 601 gggaggaagaagagtagtctcatttgaggaggaagccgagagggagatgtgcatatc 660
   |||||||
Db 661 accctctgtgacttcatctgccccctgtgagacacccctgtagtgccacagaagaagagcctg 720
   |||||||
QY 661 accctctgtgacttcatctgccccctgtgagacacccctgtagtgccacagaagaagagcctg 720
   |||||||
Db 721 aaacaaagttacagatgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 780
   |||||||
QY 721 aaacaaagttacagatgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 780
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Db 781 taacatctctctccggagagtgagctctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 840
   |||||||
QY 781 taacatctctctccggagagtgagctctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 840
   |||||||
Db 841 ggaacacagagcagaagttctcgtctcagcaagaagagagagagagagagagagagagc 900
   |||||||
QY 841 ggaacacagagcagaagttctcgtctcagcaagaagagagagagagagagagagagagc 900
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Db 901 cgcggagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 960
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QY 901 cgcggagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 960
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Db 961 caggagctctctggggccaaatgagacagtgctccaaagagttccagagctcgcagcatc 1020
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QY 961 caggagctctctggggccaaatgagacagtgctccaaagagttccagagctcgcagcatc 1020
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Db 1021 ccttcttgagacagcatgaataa 1045
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 QY 1021 ccttcttgagacagcatgaataa 1045
 |||||||

```

RESULT 2
ID 073087 standard; cDNA; 1045 BP.
AC 073087;
DE 13-JUL-1995 (first entry)
DE Bovine metalloproteinase inhibitor cDNA.
KW Metalloproteinase inhibitor; tumour cell dissemination;
KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
KW emphysema; osteoporosis; MI gene disorders; ss.
OS Bos taurus.
FH Key
FT CDS Location/Qualifiers
FT sig_peptide 289..366
FT /tag- b
FT EP-623676-A.
PD 09-NOV-1994.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PA (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI Boone TC, Declerck YA, Langley KE;
DR WPI: 94-343309/43.
DR P-PSDB: K62768.
PT New metallo:protease inhibitor, analogues and DNA - for
PT treating tumour cell dissemination, rheumatoid arthritis and for
PT large-scale recombinant inhibitor prodn.
PS Claim 12; Fig 1; 65pp; English.
CC 073087 encodes K62768 bovine metalloproteinase inhibitor (MI). It
CC may be used to inhibit tumour cell dissemination and for treating
CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
CC and osteoporosis. The DNA may be used to detect MI gene disorders.
SQ Sequence 1045 BP; 219 A; 350 C; 311 G; 165 T;

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Query Match 100.0%; Score 1045; DB 13; Length 1045;
 Best Local Similarity 100.0%; Pred. No. 0.00e+00;
 Matches 1045; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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   |||||||
Db 61 cgcgcccaagcagactctcgtctcggcgccgagccgcccgcctcctcgtctgca 120
   |||||||
QY 61 cgcgcccaagcagactctcgtctcggcgccgagccgcccgcctcctcgtctgca 120
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Db 121 ccccgagactagagcccaagaagtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 180
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QY 121 ccccgagactagagcccaagaagtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 180
   |||||||
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QY 181 cccggagagtgccgttccagaccagcgccggcgagagagggagagcgcccgagccca 240
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Db 241 ggcggcgagcagtagcccgagctcggagcccccgcctcgcgcgcagggcgccgc 300
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QY 241 ggcggcgagcagtagcccgagctcggagcccccgcctcgcgcgcagggcgccgc 300
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Db 301 gcccgagcctcgccgctcgctctcgtctcgtctgtgtgtgtgtgtgtgtgtgtgtgtgtgt 360
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QY 301 gcccgagcctcgccgctcgctctcgtctcgtctgtgtgtgtgtgtgtgtgtgtgtgtgtgt 360
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Db 361 gacgctcagctgtctccgggtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 420
   |||||||
QY 361 gacgctcagctgtctccgggtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 420
   |||||||
Db 421 atcaggggccaaagcagtcataaagaagagtgtagctctgtgtgtgtgtgtgtgtgtgtgt 480
   |||||||

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OY	414	catagtgatcaaggccaaagcagttcaataagaagsgggtgagctctgtgcaacgacatcta	473
Db	125	tggcaaccctcatcaagagagatccagatgtagatcaagcagataaagatgttccaaggcc	184
OY	474	cggcaagccccatacaagagaggtttcatgatatgataccaagcagataaagaatgttcaaggagcc	533
Db	185	tgaagaagatatagagtttatctacaacggccccctctcgtgcagatgcttgvggttcgct	244
OY	534	tgtacagagacataagattttcttcaacacagcccccgctgcgtgcgtgtgtggttcgct	593
Db	245	ggacggttggaggaagaagaaatattctatctgcagagaaagcgagggggagacgcaagat	304
OY	594	ggacatttggaggaagaagagagatcttcatttggaaggaagcgaggggaatgcaatat	653
Db	305	gcaacataccctctgtgacttatctgtgcctggcgagacccctgagacacacccagaataa	364
OY	654	gcatactacccctctgtgacttcatctgtgcctggcgagacccctgagatgccccagaata	713
Db	365	gagccgtgaacacacagagatcacagaatggcgctgcgagatgacaagatcacacggcgtcccatat	424
OY	714	gagcctgtgaacacacagagatcacagaatggcgctgcgagatgacaagatcacatcgtgccccatgat	773
Db	425	cccgctgtacatctctctcccgagcagagtgcctctgatatgacctggtgtccacagagaaga	484
OY	774	cccatgtacatctctctctcccgagcagagtgcctctgatatgacctggtgtccacagagaaga	833
Db	485	catcaaaagggaaccaagggccaagttcttcgtcgtcatcaagaagaagtgtgctgtctctgtgc	544
OY	834	catcaaaagggaaccaagggccaagttcttcgtcgtcatcaagaagaagaagtgtgctctgtgc	893
Db	545	gtggtaacggcgcgcgcgcccccccaagcagagatgttcccgacatcagagagaccataagc	604
OY	894	ctgtgtacggcgagcagcagcccccccaagcagagatgttcccgacatcagagagaccctaaagc	953
Db	605	aggccttcaaacgcccctgtgtgccaactgtcaaaaaaagcctcccaagaggtttcgac--ggtcc	663
OY	954	aggcacaacagagatcctctgtggcccaatgt-----acagtttccaagatgttcaactgtgtcc	1008
Db	664	agctctgacatccctctctgtgaacacagatgaataa	700
OY	1009	agctcagacatcccttccgtggaaacagcatgaataa	1045

ID	6	standard; cDNA; 840 BP.
AC	Q05938;	
DR	16-JAN-1991 (first entry)	
RE	TIMP-2 metalloproteinase inhibitor-encoding clone pSS15.	
CC	matrix metalloproteinase inhibitor; TIMP-2; pSS15; ss.	
CC	Synthetic.	
EH	Key	
FT	CDS	Location/Qualifiers
FT	/*tag-	
FT	/product-part of TIMP-2	
FN	US7494796-A.	
FD	21-AUG-1990.	
PF	13-MAR-1990; 494796.	
PR	21-MAR-1989; US-326334.	
PR	17-JUL-1989; US-380431.	
PR	18-AUG-1989; US-395453.	
PR	13-MAR-1990; US-494796.	
PA	(USSH) NAT INST OF HEALTH.	
PI	Stetler-Sevenson WC, Liotta LA, Krutzsch HC;	
PI	WPI: 90-29097/738.	
DR	P-PSDS; R06896.	
PT	New matrix metallo-proteinase inhibitor - used to treat diseases	
PT	resulting from matrix metallo-proteinase activity and in	
PT	diagnosis, detection and purificm.	
PS	Disclosure: Fig 6A; 54CP; Englist.	
CC	TIMP-2 was isolated from human melanoma cell-conditioned media and	
CC	the amino acid sequence determined. A probe was synthesised	
CC	based upon the protein sequence information. It was used to screen	
CC	a LambdaGem-4 cDNA library prepared from human melanoma cells. 239	

CC Positive were identified from a total of 750,000 plaques screened.
CC Further analysis and screening with additional probes eliminated
CC all but two clones (pBS15 and pBS18). Both were sequenced and found
CC to encode Csc-21k (~TfM-2), a novel metalloproteinase inhibitor.
CC See also U57317407 and W60010228.
CC See also Q05317, R06746-R06750, R06894-R06895 and Q05339-Q05340.
CC Sequence R40 BP; 209 A; 235 C; 218 G; 177 T;
SQ

Query Match	48.0%;	Score 502;	DB 1;	Length 840;
Best Local Similarity	89.3%;	Pred. No. 0.00e+00;		
Matches 604; Conservative	0;	Mismatches 66;	Indels 6;	Gaps 2

Db	136	ctccgggagagcgtctgcaaaagccgttttgcgatgcaagctgtagtgcacaggccaagc	195
QY	375	ctccccgttgcacccgcgaacagcgttttgcgaatgcaagcatagtgatcagggccaaagc	434
Db	136	ggtcagtgagaaagaaatgtgacctctggaaaacgacatttatgtgcaaaccttatcaagagat	255
QY	435	agttcaataaagaagaaagtgtagctctctggcaacgacattctagccaaccccatcaagcgat	494
Db	256	ccagatcatgataccaagacagataaagatgtttccaagaagccctctggaaagatatagattat	315
QY	455	tcaatgatagagctcaagaagataaagatgtttcaaggaaacctgtgtcaagacatatagattat	554
Db	316	ctacaagccccctcctccgacgtgtgttggtgtcttcgtctgacgcttctggagaagaagaa	375
QY	555	ctacacagccccccgcgcctctccgtgtgtgtgtgtctctgcgtgacatttggaaagaaagaa	614
Db	376	atatctcatctgcagaaagagccagagcgagcgagacagatgtgacatcaaacctcttgatt	435
-QY	615	gtattctatctgcagaggaagccagaggggaatgtgcataatgcatatcaacctcttgatt	674
Db	436	catcgtgcctctgggacaacccctgtgacacacccagaaagaagccttgaaaccaagttacca	495
QY	675	catcgtgcctctgggacaacccctgtgacacacccagaaagaagccttgaaaccaagttacca	734
Db	436	gattgggctgcgagatgcagaagatcacgcgtccccaatgatcccggtcttcatctctccccc	555
QY	735	gattgggctgcgagatgcagaagatcacgcgtccccaatgatccccaatgatctctctctccc	794
Db	556	ggaacgagtgctctctgtgactgtgactgtgctcaagaagaagaacatcaaacggtgacacaggtccaa	615
QY	795	ggaacgagtgctctctgtgactgtgactgtgctcaagaagaagaacatcaaacggtgacacaggtccaa	854
Db	616	gttcttcgctgcatacgaagaaagtgaacggtctctctgtcgtgtgtacgcggtgcggtgcgc	675
QY	855	gttcttcgctgcatacgaagaaagtgaacggtctctctgtcgtgtgtgtacgcggtgcggtgcgc	914
Db	676	cccacaagcagaagttctctgcacatcagggacccataagaagccctcccaagccctctgtg	735
QY	915	cccacaagcagaagttctctgcacatcagggacccgttaagaagcagccacacggaatcctctgtgg	974
Db	736	ccaactgcataaaaaaacctccaaggttctgcac-ggtccaagctctgaacatccctctctgtg	794
QY	975	ccaattg-----acaagtctccaagaagttcagactgtgtccagctctcgaacatccctctctgtg	1039
Db	795	aaacagcatgataaa 810	
QY	1030	aaacagcatgataaa 1045	

RESULT 7
ID T64341 standard; cDNA to mRNA, 671 BP.
AC T64341.
DT 21-MAR-1997 (first entry)
DE Human small tissue inhibitor metalloprotease 2 gene.
KW Human; small tissue inhibitor metalloprotease; TIMP-2; cancer;
KW brain tumour; malignant; diagnosis; ds.
OS Homo sapiens.
PN J09000265-A.
PD 07-JAN-1987.
PE 22-JUN-1985; 156307.
PR 22-JUN-1995; JP-156307.

PA (EISA) EISA CO LTD.
 PR WPI: 97-112848/11.
 PT New human small tissue inhibitor metallo:protease 2 gene - used in
 the detection of cancer, and to inspect malignancy of cerebral
 tumour.
 PS Claim 1: Page 5: 5pp: Japanese.
 CC The present sequence is that of the human small tissue inhibitor
 metalloprotease 2 (TIMP2) DNA. Expression of this sequence is
 negatively correlated with brain tumour malignancy, i.e. relative
 expression levels are: normal brain tissue > astrocytoma >
 anaplastic astrocytoma > glioblastoma. By determining the level of
 TIMP 2 expression in human brain tissue, the malignancy of cerebral
 tumours can be evaluated.
 CC Sequence 671 BP; 177 A; 184 C; 196 G; 114 T;
 SQ

Query Match 45.6%; Score 476; DB 28; Length 671;
 Best Local Similarity 89.8%; Pred. No. 2,90e-291;
 Matches 565; Conservative 0; Mismatches 59; Indels 5; Gaps 1;

43 agtgcacggcccaagcgcgtcagtgagaagagtgacgtctgtgaacacattatgg 102
 |||||
 417 agtgcacggcccaagcgcgtcagtgagaagagtgacgtctgtgaacacattatgg 476
 |||||
 DB 103 caaccctcaagagatccagatgagatcaagcaagataaagatgttcaaggctctga 162
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 QY 477 caaccctcaagagatccagatgagatcaagcaagataaagatgttcaaggctctga 536
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 DB 163 gaagagatagagttatctacacgccccctccgcgcgtggtgtggtctgcgtga 222
 |||||
 QY 537 tcaggaactagagttatctacacgccccctccgcgcgtggtgtggtctgcgtga 596
 |||||
 DB 223 cgttgagagaaagagatatactcattgcaggaagagcgcgaggggagcgcaagatga 282
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 QY 597 catlgagagaaagagatatactcattgcaggaagagcgcgaggggagcgcaagatga 656
 |||||
 DB 283 catccctctgtgactcattcgtccctcgggacacccctgacacccacccaagaagag 342
 |||||
 QY 657 taccctctgtgactcattcgtccctcgggacacccctgagtcacccaagaagagag 716
 |||||
 DB 343 cctgcacacagatgacagatggtcgtcgcagtgcaagatcagcgctgccccatgccc 402
 |||||
 QY 717 cctgcacacagatgacagatggtcgtcgcagtgcaagatcagcgctgccccatgccc 776
 |||||
 DB 403 gtgtacatactctcccgagagagtgctcgtgagtgagctgggtacagagaagaacat 462
 |||||
 QY 777 atgtacatactctcccgagagagtgctcgtgagtgagctgggtacagagaagaacat 836
 |||||
 DB 463 caacgggacacagcgaagttcttcgctgcatacaagagaagtgacggtcctctgctg 522
 |||||
 QY 837 caacgggacacagcgaagttcttcgctgcatacaagagaagtgacggtcctctgctg 896
 |||||
 DB 523 gtaacggcgagcgagcgccccccaagcagagttcttcgagatcgaagacccaagaag 582
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 QY 897 gtaacggcgagcgagcgccccccaagcagagttcttcgagatcgaagacccaagaag 956
 |||||
 DB 583 cctcaacagccctctgtgccaactgcaaaaaagcctcaagaaggtttcgaactggtccagc 642
 |||||
 QY 957 ccacagagactctctgggccaactg-----acagtgctcaagaagttcgaactggtccagc 1011
 |||||
 DB 643 tctgacatcctctctcgtgaacagatga 671
 |||||
 QY 1012 tctgacatcctctctcgtgaacagatga 1040
 |||||

RESULT 8
 ID Q05939 standard; DNA: 832 BP.
 AC Q05939;
 DT 16-JAN-1991 (first entry)
 DE TIMP-2 metalloprotease inhibitor-encoding clone PSS18.
 KW matrix metalloprotease inhibitor; TIMP-2; PSS18; ss.
 OS Synthetic.
 FT Key Location/Qualifiers
 CDS 170..703

FT /*tag- a
 PT /product-part of TIMP-2
 PN US7494796-A.
 PD 21-AUG-1990.
 PF 13-MAR-1990; 494796.
 PR 21-MAR-1989; US-326334.
 PR 17-JUL-1989; US-380431.
 PR 18-AUG-1989; US-395453.
 PR 13-MAR-1990; US-494796.
 PA (USHS) NAT INST OF HEALTH.
 PI Stetler-Sevenson NG, Liotta LA, Kruetzsch HC.
 DR WPI: 90-280097/38.
 P-PsDB: R06897.
 PT New matrix metallo-proteinase inhibitor - used to treat diseases
 resulting from matrix metallo-proteinase activity and in
 PT diagnosis, detection and purifich..
 PS Disclosure: Fig 6B: 54pp; English.
 CC TIMP-2 was isolated from human melanoma cell-conditioned media and
 CC the amino acid sequence determined. A probe was synthesized
 CC based upon the protein sequence information. It was used to screen
 CC a LambdaGem-4 cDNA library prepared from human melanoma cells. 239
 CC positives were identified from a total of 750,000 plaques screened.
 CC Further analysis and screening with additional probes eliminated
 CC all but two clones (PSS15 and PSS18). Both were sequenced and found
 CC to encode CSC-21K (=TIMP-2), a novel metalloproteinase inhibitor.
 CC See also Q05937, R06746-R06750, R06894-R06895, Q05938 and Q05940.
 CC See also Q05937, R06746-R06750, R06894-R06895, Q05938 and Q05940.
 SQ Sequence 832 BP; 201 A; 247 C; 222 G; 162 T;

Query Match 45.4%; Score 474; DB 1; Length 832;
 Best Local Similarity 89.7%; Pred. No. 6,30e-290;
 Matches 569; Conservative 0; Mismatches 59; Indels 6; Gaps 2;

DB 169 agtgcacggcccaagcgcgtcagtgagaagagtgacgtctgtgaacacattatgg 228
 |||||
 QY 417 agtgcacggcccaagcgcgtcagtgagaagagtgacgtctgtgaacacattatgg 476
 |||||
 DB 229 caaccctcaagagatccagatgagatcaagcaagataaagatgttcaaggctctga 288
 |||||
 QY 477 caaccctcaagagatccagatgagatcaagcaagataaagatgttcaaggctctga 536
 |||||
 DB 289 gaagagatagagttatctacacgccccctcctcgtgagtggtgtggtctgcgtga 348
 |||||
 QY 537 tcaggaactagagttatctacacgccccctcctcgtgagtggtgtggtctgcgtga 596
 |||||
 DB 349 cgttgagagaaagagatatactcattgcaggaagagcgaggggagcgcaagatga 408
 |||||
 QY 597 catlgagagaaagagatatactcattgcaggaagagcgaggggagcgcaagatga 656
 |||||
 DB 409 catccctctgtgactcattcgtccctcgggacacccctgacacccacccaagaagag 468
 |||||
 QY 657 taccctctgtgactcattcgtccctcgggacacccctgagtcacccaagaagagag 716
 |||||
 DB 469 cctgcacacagatgacagatggtcgtcgcagtgcaagatcagcgctgccccatgccc 528
 |||||
 QY 717 cctgcacacagatgacagatggtcgtcgcagtgcaagatcagcgctgccccatgccc 776
 |||||
 DB 529 gtgtacatactctcccgagagagtgctcgtgagtgagctgggtacagagaagaacat 588
 |||||
 QY 777 atgtacatactctcccgagagagtgctcgtgagtgagctgggtacagagaagaacat 836
 |||||
 DB 589 caacgggacacagcgaagttcttcgctgcatacaagagaagtgacggtcctctgctg 648
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 QY 837 caacgggacacagcgaagttcttcgctgcatacaagagaagtgacggtcctctgctg 896
 |||||
 DB 649 gtaacggcgagcgagcgccccccaagcagagttcttcgacatcgaagacccaagaag 708
 |||||
 QY 897 gtaacggcgagcgagcgccccccaagcagagttcttcgacatcgaagacccaagaag 956
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 DB 709 cctcaacagccctctgtgccaactgcaaaaaagcctcaagaaggtttcgaactggtccagc 767
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 QY 957 ccacagagactctctgggccaactg-----acagtgctcaagaagttcgaactggtccagc 1011
 |||||


```

Db 351 cccagcgcaagggtgctgaactatcgtatcacctgggtgttgaactgcaagatcaagtct 410
    ||||| ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 704 cccagagaagaagccctgaaccacaggtacacagtggtgctgtgtagtgcgaatcactcgat 763
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 411 gctactaactgctctgtctgtgtgaacttcaagaagagtgctctctgacacgaatgctct 470
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 764 gccccatgaltcccatgtctacatctctctcccgacgagtgctctctgtgaltgactgggtca 823
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 471 ccaattcggttacccctgtgctaccagttccaacactacgctgtgacgcgcagagaaggcg 530
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 824 cggagaagaacatcaacagacacacaggtctctctcgccctgcatcaagaagaagcgacg 883
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 531 gctactgcaactgtgtacccgagagatggcccccc 564
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 884 gctcctgcgcctgtgtaccgcggagacgaaccccc 917
    ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

```

Search completed: Mon May 4 13:25:12 1998
 Job time : 375 secs.

was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(4T) primer [5].
 TGTACCAATCTGAGTGGAGCGGCCGCCCAATTTTCTTTTCTTTT 3').
 (Pharmacia), digested with Not I and Eco RI adaptors (Pharmacia), digested with Not I and Eco RI sites of the modified p7713 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo.

/db_xref="Gene:5930425"
 /db_xref="taxon:9606"
 /clone_lib="Soares testis NHT"
 /clone_lib="743271"
 /sex="male"
 /lab_host="DH10B"

BASE COUNT 98 a 150 c 164 g 144 t
 ORIGIN

Query Match 38.3%; Score 400; DB 28; Length 556;
 Local Similarity 89.8%; Pred. No. 0.00e+00;
 Matches 485; Conservative 0; Mismatches 49; Indels 6; Gaps 2;

DB 18 TTTATTCATGCTGTTTCCAGAGGATGTCAAGCTGACCTGACCACTGCAACCTTGGAGG 77
 |||||
 CP 1045 ttatcctatcctgctgctcagagagagatgctgagctgaccagctgacatctggaca 986
 DB 78 CTTTATTTGACATGAGCCAGGGGCTTGGAGGCTGCTTATGGTCTCTGATGCGAG 137
 |||||
 CP 985 cctg-----caatggcccaagagagctcctgctgctgctgctgctgctgctgctg 931
 DB 138 AAATCTGCTGTTGGGGGGGCGCCGCG-EGCGTACACAGCAGAGAGCCCTCACTTCTT 196
 |||||
 CP 930 aaactcctgctgggggggctgctgctgctgctgctgctgctgctgctgctgctgct 871
 DB 197 GATGAGGAGGAGAACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 256
 |||||
 CP 870 gatgag 811
 DB 257 CCAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 316
 |||||
 CP 810 ccag 751
 DB 317 GCATCTGAGCCCATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 376
 |||||
 CP 750 gacatcag 691
 DB 377 GTCCAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 436
 |||||
 CP 690 gtccag 631
 DB 437 TCTGCAATGAGATATCT 496
 |||||
 CP 630 cctcag 571
 DB 497 GAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 556
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 CP 570 ggcgggggggctgctgctgctgctgctgctgctgctgctgctgctgctgctgctg 511
 RESULT 2
 LOCUS W49684 518 bp mRNA EST 11-OCT-1996
 DEFINITION zc3c09 r1 Soares senescent fibroblasts NDHSF Homo sapiens CDNA
 clone 325072 5' similar to gb:S48568 TISSUE INHIBITOR OF
 METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION W49684
 NID 91337958
 KEYWORDS EST.
 SOURCE human.
 ORGANISM Homo sapiens
 Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota;
 Vertebrata; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
 REFERENCE 1 (bases 1 to 518)

AUTHORS Hillier, L., Clark, N., Dubuque, J., Elliston, K., Hawkins, M.,
 Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
 Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, E.,
 Trevisan, E., Waterston, R., Williamson, A., Wohlmann, P. and
 Wilson, R.
 TITLE The WashU-Merck EST Project
 JOURNAL Unpublished (1995)
 COMMENT

Contact: Wilson RK
 WashU-Merck EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.edu
 This clone is available royalty-free through LNL; contact the
 IMAGE Consortium (info@image.llnl.gov) for further information.
 Insert Length: 615 Std Error: 0.00
 Seq primer: mob.REGA+EF
 High quality sequence stop: 381.
 Location/Qualifiers

FEATURES
 SOURCE

1. 518
 /organism="Homo sapiens"
 /note="Vector: p7713D (Pharmacia) with a modified
 polylinker V type; phagemid: Site 1: Not I; Site 2: Eco
 RI; TGTACCAATCTGAGTGGAGCGGCCGCCCAATTTTCTTTTCTTTT
 3'), double-stranded cDNA was size selected, ligated to
 Eco RI adaptors (Pharmacia), digested with Not I and
 Eco RI sites of the modified p7713 vector (Pharmacia). Library went through one round of
 normalization to a Cot = 5. Library constructed by Bento
 Soares and M. Fatima Bonaldo."
 /db_xref="taxon:9606"
 /clone_lib="325072"
 /clone_lib="Soares senescent fibroblasts NDHSF"
 /tissue="senescent fibroblast"
 /lab_host="DH10B (ampicillin resistant)"
 <1..>518

BASE COUNT 126 a 152 c 143 g 94 t 3 others
 ORIGIN

Query Match 34.8%; Score 364; DB 16; Length 518;
 Best Local Similarity 89.6%; Pred. No. 0.00e+00;
 Matches 414; Conservative 0; Mismatches 47; Indels 1; Gaps 1;

DB 1 AGATGTCAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 60
 |||||
 CP 518 agatgtcaag 577
 DB 61 TGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 120
 |||||
 CP 578 tgtgtgag 637
 DB 121 AGGGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 180
 |||||
 CP 638 agggag 697
 DB 181 GCACACCCAGAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 240
 |||||
 CP 698 gtgcacccag 757
 DB 241 CGCGTGGCCCATGATCCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 300
 |||||
 CP 758 ctgctgctccatgctccatgctccatgctccatgctccatgctccatgctccatgct 817
 DB 301 GGTGTCAG 360
 |||||
 CP 818 ggtgtcag 876
 DB 361 AGTGAAGGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 420
 |||||
 CP 877 agcgag 936

Db	421	ATCGAGGACCCCATTAAGCAGAGCGCTCCAAAGCCCCCTGTGGGCCA	462
Oy	937	atcgagaccgctaacgcagcagccagactctggcgcca	978
RESULT LOCUS	3 AA400168	583 bp mRNA EST	09-NOV-1997
DEFINITION	zue9f08.r1 Soares testis NHT Homo sapiens cDNA clone 743271 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);		
ACCESSION	AA400168		
MID	g2054120		
KEYWORDS	EST.		
SOURCE	human.		
ORGANISM	Homo sapiens Eukaryote; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.		
REFERENCE	1 (bases 1 to 583) Hallier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kitzman,D., Kucaba,T., Lacey,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Stepoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: estevenson.wustl.edu This clone is available royalty-free through LML ; contact the IMAGE Consortium (infoimage.llnl.gov) for further information. Insert length: 869 Std Error: 0.00 Seq primer: -28ml3 rev2 ET from Amersham High quality sequence stop: 493.		
TITLE	Contact: Wilson RK		
JOURNAL	unpublished (1997)		
COMMENT			
FEATURES	<p>source</p> <p>/organism="Homo sapiens"; /note="Vector: pRTT3-Pac (Pharmacia) with a modified polylinker. Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(dT) primer [5]; TGTTACCATTCAATGAAGTGGAGCGGCAGCCCAATTTTTTTTTTTT 3']; Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pRTT3 vector. Library went through one round of normalisation to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo." /db_xref="GeneBank:5930425" /db_xref="taxon:9606" /clone="743271" /clone_lib="Soares testis NHT" /sex="male" /lab_host="DH10B" /Lab host="DH10B"</p>		
BASE COUNT	147 a	151 c	163 g 122 t
ORIGIN	<p>Query Match 33.9%; Score 354; DB 28; Length 583;</p> <p>Best Local Similarity 91.7%; Pred. No. 0.00e+00;</p> <p>Matches 389; Conservative 0; Mismatches 35; Indels 0; Gaps 0;</p>		
Db	159	TGATATGAGGCCAACACGGTCAGTGAAGAAGAGTAGTCTGTGAAACGACATTTATGCA	218
Oy	419	tgaataaggccaaacagcaacaataagaagagtgtgaccttgcacagcatctaagca	478
Db	219	ACCCATATCAAGAGAGNCCGATGATGATGAACAACAGATAAAGTTCGAAGGCGCTGAGA	278
Oy	479	aecccatcaagcgatttcgatgatcatcaagcagataaagatgtttcaaggacctgcac	538
Db	279	AGGATATAGAGTTTATCTACTACAGGCGCCCTCTCTGGCAGTGTGTGGGCTCTCGCTGGACG	338

OY	539	aggaatagaatttatactcaacaggccccgcgctggcgtgtgttggtcttcgctggaca	598
Db	339	TTGGAGGAAGAAGAAATATCTCATTTGCAGGAAAAGCCGAGGGAGGACCGCAAGATGCACA	398
OY	599	ttagaggaagaagagagtatctcatctgatcgaggaaagccgaggggaatgccaatctgcata	658
Db	399	TCAACCCTGTGTACTTTCATCTGTCGCCCTTGAGCACCCCTTGACACACCAAGAAAGAGCC	458
OY	659	taacctctgtgactcatctgtgcccttggacaccctgtgtgccaccceagaagaagacc	718
Db	459	TGAACCAAGGTAACAGATGGGCTCCTCGAGTGTGAATATACGGCGMCCCCANGATCCCT	518
OY	719	tgaaccacaaggtaccagatcggcctgtgtagaagatactaactgaagcccacgatcccat	778
OY	779	gctaatctctcctccgcgacgagtgctcctgtatgactgactggttcaacgagaaatatca	838
Db	579	ACGG 582 	
OY	839	acgg 842	
RESULT	4		
LOCUS	AA183361	531 bp mRNA EST	15-FEB-1997
DEFINITION	mo96g07.r1 Stratagene mouse testis (#937308) Mus musculus cDNA clone 567612 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN); gb:X67622 M.musculus TIMP-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE)..		
ACCESSION	AA183361		
NID	91767539		
KEYWORDS	EST.		
SOURCE	house mouse.		
ORGANISM	Mus musculus		
	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.		
REFERENCE	Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Getzel,S.S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.		
TITLE	The WashU-HMI Mouse EST Project		
JOURNAL	Unpublished (1996)		
COMMENT	Contact: Marra M/Mouse EST Project WashU-HMI Mouse EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel.: 314 286 1800 Fax: 314 286 1810 Email: mouseest@wustl.wustl.edu This clone is available royalty-free through LNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information. MG1:342260 Seq primer: -28m13 rev1 ET from Amerham High quality sequence stop: 96. Location/Qualifiers 1. 531 /organism="Mus musculus" /strain="Inbred CD-1" /note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2: XhoI; Cloned unidirectionally. Primer: Oligo dT. Average insert size: 1.0 Kb; Uni-ZAP XR Vector"; -5' adaptor sequence: 5' GAAATCGGCACAGC 3' -3' adaptor sequence: 5' CTCGAGTTTTTTTTTTTTTTTTT 3' /db_xref="taxon:10090" /clone="567612" /clone_lib="Stratagene mouse testis (#937308)." /sex="males"		
FEATURES	source		

Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
Primates; Catarrhini; Hominoidea; Homo.
1 (bases 1 to 464)
Haller, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S.,
Kizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M.,
Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F.,
Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R.
Mashu-NCI human EST Project
JOURNAL
COMMENT
Unpublished (1997)

Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@wustl.wustl.edu
This clone is available royalty-free through LNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40m3 fwd. ET from Amersham.

FEATURES

Location/Qualifiers
1..464
/organism="Homo sapiens"
/note="Organ: Liver and Spleen; Vector: pT73D (Pharmacia)
with a modified polylinker; Site 1: Pac I; Site 2: Eco RI;
this is a subtracted version of the original Soares fetal
liver spleen INFS library. 1st strand cDNA was primed
with a Pac I - oligo(dT) primer [5',
ACTGAGAAATTAATTAAGATCTTTTCTTTTCTTTT 3'],
double-stranded cDNA was ligated to Eco RI adaptors
(Pharmacia), digested with Pac I and cloned into the Pac I
and Eco RI sites of the modified pT73 vector. Library
went through one round of normalization. Library
constructed by Bento Soares and M. Fatima Bonaldo."
/db_xref="GDB:1335836"
/db_xref="taxon:9606"
/clone.lib="Soares fetal liver spleen INFS S1"
/sex="male"
/dev_stage="20 week-post conception fetus"
/lab_host="DH10B (ampicillin resistant)"

BASE COUNT 77 a 123 c 143 g 121 t
ORIGIN

Query Match 31.2% Score 326; DB 29; Length 464;
Best Local Similarity 90.0%; Pred. No. 0.00e+00;
Matches 406; Conservative 0; Mismatches 38; Indels 7; Gaps 3;

nb 16 TTTATTCATGCTGTTTCAGAGGATGTCAGACGTCGAAACCTTGAGG 75
|||||
1045 ttattcatgctgctgcaggaagatgctgagctgacccgctgaaacttggaca 96
db 76 CTTTTCAGCTGGCCACAGGGGCGCTGGAGCGCTTATGCTTCGATGCGAG 135
|||||
cp 985 cgtg-----caattggcccaagagagctcgtgctcgtcttaagggccctgctcag 931
db 136 AAATCTCTCTGGGGGGGGCGCGC-GCG-TACACGACACAGAGCGCTCACTTCTT 193
|||||
cp 930 aaactctctgctgggggctgctcgcgtacccagggcaggaagccctgcttctcct 871
db 194 GATGACGAGGAGAACTTGCGCTGGCGCTGATGTTTCTTCGTCGCCAGTCCAT 253
|||||
cp 870 gatgcagaggaagaaacttgcgtgctcgttgcgttcttcttcgtgaccagctccat 811
db 254 CCAGAGGACTGCTCCGGGAGAGATGTAACAGGATATGAGGAGCGCGCTGATCTT 313
cp 810 ccagagagcctcgtccggagagagatgtagcatgagatgggagatgagatcctt 751
db 314 GCACTGGACCCCATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 373
cp 750 gcaactacagcccatctgttacctgtgttccagccttcttcttctgttgcacacaggt 691
db 374 GTCGAGGAGGAGATGAAGTACAGAGGAGGATGATGATGATGATGATGATGATGATGAT 433
|||||

cp 690 gtcccaaggacagatgaagctcagagaggtgatatgcatatttccattccctgcgctt 631
db 434 TCCGTGAAATGAGATATCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 464
cp 630 cccctgaatgagatgatactctcttcttcccca 600

RESULT 7
LOCUS AA183676 757 bp mRNA EST 15-FEB-1997

DEFINITION mo98c08.r1 Stratagene mouse testis (#937308) Mus musculus cDNA
clone 567758 5' similar to gb:S48568 TISSUE INHIBITOR OF
METALLOPROTEINASES II PRECURSOR (HUMAN); gb:X62622 M.musculus
TIMP-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE);
AA183676
91767241

ACCESSION
NID
KEYWORDS
SOURCE
ORGANISM
Mus musculus
house mouse.
Eukaryotae; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
Mus.

REFERENCE
AUTHORS
1 (bases 1 to 757)
Marra, M., Haller, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,
Geisel, S., Kucaba, T., Lacy, M., Le, N., Martin, J., Morris, M.,
Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
Waterston, R.
The Mashu-NCI Mouse EST Project
JOURNAL
COMMENT
Unpublished (1996)

Contact: Marra M/Mouse EST Project
Mashu-NCI Mouse EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseest@wustl.wustl.edu
This clone is available royalty-free through LNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -28m3 rev1 ET from Amersham
MGI:342406
High quality sequence stop: 444.
Location/Qualifiers
1..757
/organism="Mus musculus"
/strain="Inbred CD-1"
/note="Vector: pBluescript SK-; Site 1: EcoRI; Site 2:
XhoI; Cloned unidirectionally. Primer: Oligo dT. Average
insert size: 1.0 kb; Uni-ZAP XR vector; -5' adaptor
sequence: 5' GAATTCGCGACGAG 3' -3' adaptor sequence: 5'
CTCGAGTTTCTTTTCTTTTCTTTTCTTTT 3'."
/db_xref="taxon:10090"
/clone.lib="Stratagene mouse testis (#937308)"
/sex="males"
/dev_stage="10-12 week old"
/lab_host="SOLR (kanamycin resistant)"
<1..>757

BASE COUNT 184 a 198 c 210 g 163 t 2 others
ORIGIN

Query Match 31.1% Score 325; DB 18; Length 757;
Best Local Similarity 84.1%; Pred. No. 0.00e+00;
Matches 423; Conservative 0; Mismatches 76; Indels 4; Gaps 4;

db 258 TGATCAGAGCAAG 317
oy 419 tgatcagagcacaagaagatcaataaagagagtgacccctggcaagcaccatcaagca 478
db 318 ACCCATCAAGAGAGATTCAGTATGATGATCAAGCAGATAAGATGTTCAAGAGACTGACA 377
oy 479 accccatcaagcagatgctgtagatgagatcaagcagatgaagtgttcaagggaccctgac 538
|||||

TITLE Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
Parsons, J., Rifkin, L., Rohlfing, T., Tan, F., Trevasakis, E.,
Waterston, R., Williamson, A., Wohlmann, P. and Wilson, R.
JOURNAL Washu-Merck EST Project
COMMENT Unpublished (1995)
Other ESTs: yb05d08.s1
Contact: Wilson RK
Washu-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
High quality sequence stops: 391
Source: IMAGE Consortium, LNL
This clone is available royalty-free through LNL; contact the
IMAGE Consortium (Info@image.lnl.gov) for further information.

FEATURES
source 1. 434
/organism="Homo sapiens"
/clone="70287"
Location/Qualifiers

E COUNT 111 a 109 c 125 g 86 t 3 others

Query Match 30.6%; Score 320; DB 10; Length 434;

Best Local Similarity 90.0%; Pred. No. 0.00e+00; Mismatches 38; Indels 5; Gaps 5;

Matches 385; Conservative 0; Mismatches 38; Indels 5; Gaps 5;

Db 8 GGCACCTTATCAAGAGATCCAGATGAGATCAAGCAGATAAAGATGTTCAAGGCC 67

QY 475 ggcacccatcaagcagatcag-tatgagatcaagcagataagatgattcaagggac 533

Db 68 TGAGAAAGATATAGATTATCTACAGGCCCCCTCTCGGCACTGTGTGGGTCTGCT 127

QY 534 tgacagagatatagattatctacacagccccgcgctgctgtgtgtgtgtgtgtgt 593

Db 128 GAGAGTGAAGAGAGAGAGATATCTATGATGAGAGAGAGAGAGAGAGAGAGAGAT 187

QY 594 ggcacatggagagagagagagagatcattcagcagagagagagagagagagagat 653

Db 188 GCACATCACCTGTGACTTCATCTGACCTGAGACACCTGAGACACACAGAGAGAA 247

QY 654 gcatatcacctgtgacttcatctgctgagacccctggtgtgtgtgtgtgtgtgtgt 713

Db 248 GAGCCTTAACCAAGATGAGATGAGATGAGATGAGATGAGATGAGATGAGATGAG 307

QY 714 gagccttaacacagatgagatgagatgagatgagatgagatgagatgagatgagat 773

Db 308 CCCGCTTACATCTCTCCCGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 367

QY 774 cccatgct-acatctctctcgcagcagtgctctgagtgagtgagtgagtgagtgag 832

Db 368 ACATCAACGGGACAGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 426

QY 833 acatcaacgggacag 890

Db 427 TGCCTGT 434

QY 891 cgcctgt 898

RESULT 10

LOCUS W49694 489 bp mRNA EST 11-OCT-1996

DEFINITION zc43c09.s1 Soares senescent fibroblasts NBHSF Homo sapiens CDNA

clone 325072.3' similar to gb:S48568 TISSUE INHIBITOR OF

METALLOPROTEINASES II PRECURSOR (HUMAN);.

ACCESSION W49694

NID g1337959

KEYWORDS EST.

SOURCE human.

ORGANISM Homo sapiens

Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata;

REFERENCE Vertebra; Euthera; Primates; Catarrhini; Homiidae; Homo.

1 (bases 1 to 489)

Authors Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,

Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,

Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,

Trevasakis, E., Waterston, R., Williamson, A., Wohlmann, P. and

Wilson, R.

JOURNAL The Washu-Merck EST Project

COMMENT Unpublished (1995)

Contact: Wilson RK

Washu-Merck EST Project

Washington University School of Medicine

4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108

Tel: 314 286 1800

Fax: 314 286 1810

Email: est@watson.wustl.edu

This clone is available royalty-free through LNL; contact the

IMAGE Consortium (Info@image.lnl.gov) for further information.

Insert Length: 615 Std Error: 0.00

Seq primer: mob. REGA+ET

High quality sequence stop: 387.

Location/Qualifiers

1. 489

/organism="Homo sapiens"

/note="Vector: pT73D (Pharmacia) with a modified

polylinker V-type; phagemid; Site 1: Not I; Site 2: Eco

RI; TGTTCACATCTGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG

3'1, double-stranded cDNA was size selected, ligated to

Eco RI adapters (Pharmacia), digested with Not I and

cloned into the Not I and Eco RI sites of a modified pT73

vector (Pharmacia). Library went through one round of

normalization to a Cot = 5. Library constructed by Bento

Soares and M. Fatima Bonaldo.

/db_xref="taxon:9606"

/clone="325072"

/tissue="senescent fibroblasts NBHSF"

/lab_host="DH10B (ampicillin resistant)"

complement(<1..>489)

BASE COUNT 81 a 127 c 145 g 132 t 4 others

ORIGIN

Query Match 30.1%; Score 315; DB 16; Length 489;

Best Local Similarity 88.2%; Pred. No. 0.00e+00; Mismatches 47; Indels 7; Gaps 3;

Matches 403; Conservative 0; Mismatches 47; Indels 7; Gaps 3;

Db 32 TTATTCATCGCTTTTCAG 91

Cp 1045 ttatctcat-gctgtgtcag 987

Db 92 GCTTTTTCAGAGTGGCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 151

Cp 986 actgt-----caatggccacagagagagagagagagagagagagagagagagagagag 932

Db 152 GAAACTCTGCTTTGG 211

Cp 931 gaaactctgtctgt 872

Db 212 TGATCAG 271

Cp 871 tgatcag 812

Db 272 TCCAG 331

Cp 811 tccag 753

Db 332 TTGACATGAG 391

Cp 752 ttgacatgag 693

Db 392 GTGTCAG 451

[illegible]

	Db	152	AACCTCCGTCATTGGGGGGCGGCCGCAGCAGCAACAAGAGCGTACTTTCTT	211			
	Cp	930	aactctccgcttgggggtgtcgtctccgcggataccaggcgacagcgctgcccttc	871			
	Dd	212	GATGACGCGAAGAAGACTTGCGCTGTGGTCCCGCTTGATGTTCTTCTGTGAACCAGTCCAT	271			
	Cp	870	gatcgaggcgagaacctgyccttggtgtcctgtatgtttcttcctgcgtgccccagtcat	811			
	Dd	272	CCAGAGCGACTCTGTCGCGGGGAGAGATGTAGCACGGGATCATGGGGCAGCGCGTATCTT	331			
	Cp	810	ccaagygacctgcgtccgagaggaagttagcaatcyggaatacatgyggatcgatgtaattc	751			
	Dd	332	GCATCGCAGCGCCATTCNGTGATCTGTCAGCTGTTCAGCGCTTCTTCGCGGGGTGTGTCA	391			
	Cp	691	tgtcccagggcacgatgaagcacacaggggtgatataatgcatatgcatctcccctcgg-cc	633			
	Dd	452	TGTCCACAGGCGACGATGAAGTACACAGAGGTGAAGTGCATCTTCCCCTCCCCCTCGG	451			
	Cp	632	tcccctgcacatgatatcctcttcttcctccaatgt	596			
RESULT	LOCUS	12	M49721	532 bp mRNA EST 11-OCT-1996			
DEFINITION	zc43g09.i1 Soares senescent fibroblasts NBHSF Homo sapiens cDNA clone 32i120 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);.						
ACCESSION	NID	M49721					
KEYWORDS	SOURCE	EST. human.					
ORGANISM	Homo sapiens Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Carnivora; Homnidae; Homo.						
REFERENCE	1 (bases 1 to 532)						
AUTHORS	Hallier,L., Clark,N., Dubugue,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaaskis,E., Waterston,R., Williamson,A., Wohlmann,P. and Wilson,R.						
TITLE	The WashU-Merck EST Project						
JOURNAL	Unpublished (1995)						
COMMENT	<p>Contact: Wilson RK WashU-Merck EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel.: 314 286 1800 Fax: 314 286 1810 Email: est@wustl.edu This clone is available royalty-free through LNLN ; contact the IMAGE Consortium (infoimage.llnl.gov) for further information. Insert Length: 627 Std Error: 0.00 Seq primer: mob.RBSGA+ET High quality sequence stop: 347. location/Qualifiers 1. 532 /organism="Homo sapiens" /note="Vector: pTF73D (Pharmacia) with a modified polylinker V-type: phagemid; Site_1: Not I; Site_2: Eco RI; GATCCAAATCGAATGAGTAGCGAGCGCGCTTTTTTTTTTTTTTTT 3'", double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pTZ vector (Pharmacia). Library went through one round of normalization to a Cot =5. Library constructed by Bento Soares and M.Facioma Bonaldi."</p>						
FEATURES	source						
	/db_xref="taxon:9606"						

Query Match	28.0%; Score 293; DB 16; Length 532;
Best Local Similarity	88.2%; Pred. No. 0.00e+00;
Matches 412; Conservative	0; Mismatches 42; Indels 13; Gaps 12;
<p> mRNA BASE COUNT 130 a 157 c 143 g 99 t 3 others ORIGIN </p>	<p> /clone="325120" /clone_lib="Soares senescent fibroblasts NBHSF" /tissue_type="senescent fibroblast" /lab_host="DH10B (ampicillin resistant)" <1..>532 </p>
<p> Db 1 AGATTTTCAAGAGGCGCTGAGAGGATATAGATTATCTACACGGCCCCCTCTCGGAG 60 518 agatttcaagagagcctgacagagacatagattatcacacagccccccgctgcg 577 61 TGTGTGGGCTCCCTGAGCGTGTGAGGAAAGAAAGATATCTCATTCAGAAAGCGC 120 578 tgtgtgggctctcgtgacatttgagaaagaagatattctatcttcagagggaagccg 637 121 AAGGGAGCGCAAGATGCATCACCTCTGTGACTTCATCGTGGCCGTGGACACCTTGA 180 638 aagggaatgycatatgatataccacctctgacttcacgtgcctcggagacacctga 697 Db 181 GCACACCCAGCAAGAGAGCCCTGAAACACAGTACCAGATGGGCTGCAGATGCAAGATCA 240 698 gtccaccacagagaagagagcctgaaccacaggtaccagatggctgtgagtaagatca 757 Db 241 CGCGCTGCCCATGATCCCGTGTACATCTCTCCCGGACGAGAGCGCTCTGATG 300 758 ctgcgtgcccatgattccca-tgtaacatctctcttc-gagacga-gtgcctctgagatg 814 Db 301 ACTGGGTCAAGAGAGAAATCAATCAAGGGGACACAGGCCAAAGTCTTGCCTTGATCAA 360 815 actgggtcacgagagaagacatcaacagcacagacagacga-gtctctgcct-gatca 872 Db 361 AGAGAGAGACAGCGCTCTGTCGCTGTGTAACGGGGCGGCGGCCCCCAAGGACAGA 420 873 -gagaagagcag-ggctctctgcgc-tgttaccgaggaagacaccccc-aagc-agga 926 Db 421 GTTGTCCGACATCGAGACCCATTAANAAGCGCTCCCAAGCGCCCTG 467 927 gttcttg-gacatcgagagaccctgaagca-ggcacacaggaatcctg 971 </p>	<p> RESULT 13 LOCUS R68697 327 bp mRNA EST 26-JUN-1995 DEFINITION y114a03.r1 Homo sapiens cDNA clone 139180 5' similar to gb:s48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);. ACCESSION R68697 NID 9842214 KEYWORDS EST. SOURCE human clone-139180 library-Soares Placenta Nb2HP vector-pt773D (Pharmacia) with a modified polylinker host-DH10B (ampicillin resistant) primer-M13R1 SalI1-Not I SalI2-Eco RI Female Placenta obtained at birth (full term). 1st strand cDNA was primed with a Not I - oligo(dT) primer 15'. AACTGGAGAGATTCGGCGCGGACGAGAAATTTTTTTTTTTTTTTT 31', double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT73 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldi. Homo sapiens Eukaryotes: Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Chonadata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Homiiniid; Homo. 1 (bases 1 to 327) Hillier,L., Clark,N., Dubnue,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevasz,I., Waterston,R., Williamson,A., Woldman,P. and </p>
<p> REFERENCE AUTHORS </p>	

TITLE	JOURNAL
MILSON, R.	The WashU-Merck EST Project Unpublished (1995)
COMMENT	Contact: Milson RK WashU-Merck Est Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@wustl.wustl.edu High quality sequence stops: 187 Source: IMAGE Consortium, LLNL This clone is available royalty-free through LLNL; contact the IMAGE Consortium (infoimage.llnl.gov) for further information. Location/Qualifiers 1..327
FEATURES	source /organism="Homo sapiens" /clone="J39180"
BASE COUNT	81 a 90 c 95 g 57 t 4 others
ORIGIN	
Query Match	26.0%; Score 272; DB 12; Length 327;
Best Local Similarity	91.6%; Pred. No. 0.00e+00;
Matches 295; Conservative	0; Mismatches 27; Indels 0; Gaps 0;
D6 AGGATATTAGTTTATCTACACGGCCCTCCTCGGAGTGGTGGGNGTCGTGCACG 65	
OY	
OY 539 aggaacataagattatctacaacgccccgcgcgtcgtygtggctcgtcgaga 598	
DB 66 TTGGAGGAAGAAGAATATCTCATTTNAGAAAGGCCGAGGGGGAGCGCAAGATGCACA 125	
OY 599 ttgaggaaagaaagagatcatctcaatgaggaagccggaaggyaatgcaatgatcata 658	
DB 126 TCACCCTGTGACTCTCACGCGCCCTCGGAGACACCTTAGACACACCAAGAAGAACGCC 185	
OY 659 tcacctcttgacttcactatcgtgcccttggagacccttagtgtcacccaagaagaagcc 718	
DB 186 TGACACACAGSTACAGATGGGCTCGAAGTCAGATCACGGCGTCCCCATGATCCCGT 245	
OY 719 tgaaccaagagtaaccagtgtgctgtgagtgaagatcaactcgatgcccocatgacct 778	
DB 246 GCTAATCTCCCNCCCAGACGATGCCCTTCGTGATGGACTNGTTCACAGAGAAGAACATCA 305	
OY 779 gtacatctccctctccgagcagagtcctctgtgatatgactggtcacagagaacacata 838	
DB 306 ACGGGCACCAGGGGCAAGTTCTT 327	
OY 839 acggaaccaagggccaagttctt 860	
RESULT 14	
LOCUS	M85579 394 bp mRNA EST 26-NOV-1992
DEFINITION	EST02095 Homo sapiens CDNA clone HFBCK35 similar to Metalloproteinase inhibitor.
ACCESSION	M85579
NID	9274226
KEYWORDS	EST.
SOURCE	human clone-HFBCK35 library-Fetal brain, Stratagene (cat#936206) vector-LambdaZAP-II primer-WM3 forward 17-18 wk gestation, female; Oligo-dT + random primed CDNA synthesis; lambdaZAP-II vector, 1.0Kbp average insert size.
ORGANISM	Homo sapiens
AUTHORS	Eukaryotes; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcophrygill; Choanata; Tetrapoda; Amniota; Mamalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Homnidae; Homo.
REFERENCE	1 (bases 1 to 394) Adams,M.D., Dubnick,M., Kerlavage,A.R., Moreno,R., Kelley,J.M., Utterback,T.R., Nagle,J.W., Fields,C. and Venter,J.C.
TITLE	Sequence identification of 2,375 human brain genes
JOURNAL	Nature 355 (6361), 632-634 (1992)

MEDLINE 92168112
COMMENT

Contact: Kerlavage AR
The Institute for Genomic Research
932 Clopper Road, Gaithersburg, MD 20878
Tel: 3018699056
Fax: 3018699423
Email: arkerlavage@igf.org

FEATURES
Source Location/Qualifiers

1..394
/organism="Homo sapiens"
/clone="HFBCK35"
mrna
/gene="D0S272E"
gene
<1..>394
/gene="D0S272E"

BASE COUNT 93 a 128 c 99 g 71 t 3 others
ORIGIN

Query Match 25.4%; Score 265; DB 12; Length 394;
Best Local Similarity 90.8%; Pred. No. 0.00e+00;

Matches 297; Conservative 0; Mismatches 29; Indels 1; Gaps 1;

Db 1 ATGCATCACCCTCTTACTTCATCTGCGCCGAGACCCCTGACACCAAGAG 60
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QY 652 atgcatcaccctcttgacttcctgctgagaccctgagtcaccccgaaag 711
Db 61 AAGACCGAAGACAGAGGACAGATGGGCTGCGATGCAAGATCAGCGCTGCCCATG 120
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QY 712 aagacccgaagacacagagacacagatggctgagtgagtaagatactgagccccatg 771
Db 121 ATCCGCTCATCATCTCTCCCGGAGAGAGTCCCTGTGATGAGTGGTCAACAGAG 180
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QY 772 atccatgctacatctctctcctcgagagagtgctctgactggttaccgagaaag 831
Db 181 AAGATCAACGGGACACAGGCGCAAGTTCTTCCCTGATCAAGAGAGTACGGCTCTCT 240
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QY 832 aacatcaacgagacacagacagacagctcttcgctcatcaagaagcagcgtctctg 891
Db 241 GCGTGTACCGGGGGGCGG-CCGCCCCCAAGAGAGTTCTTGCATCATGAGAGACCATTA 299
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QY 892 gccgtgtacgggagcagcagaccccaagcagaggttcttgacatcgagaccgta 951
Db 300 GCAGGCTTCAACAGNCCCTTTGGCCAA 326
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QY 952 gcaggccacacagactcctctggygcca 978

||T 15
JS M85403 336 bp mRNA EST 26-MAY-1992

DEFINITION EST01918 Homo sapiens cDNA clone HFBCH66 similar to
Metalloproteinase inhibitor.

ACCESSION M85403
NID 9274051
KEYWORDS

SOURCE human clone-HFBCH66 library-Petal brain, Striatum (Cat#936206)
vector-lambdaZAP-II primer-M13 Forward 17-18 wk-gestation, female;
Oligo-dT + random primed cDNA synthesis; lambdaZAP-II vector, 1.0kb
average insert size.

ORGANISM

Homo sapiens

Eukaryota; Metazoa; Eumetazoa; Bilateria; Coelomata;
Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes;
Sarcopterygii; Chonata; Tetrapoda; Amniota; Mammalia; Theria;
Eutheria; Archonta; Primates; Catarrhini; Hominoidea; Homo.
1 (bases 1 to 336)

REFERENCE

Adams,M.D., Dubnick,M., Kerlavage,A.R., Moreno,R., Kelley,J.M.,
Uterback,T.R., Nagle,J.W., Fields,C. and Venter,J.C.

TITLE

Sequence identification of 2,375 human brain genes

JOURNAL

Nature 355 (6361), 632-634 (1992)

MEDLINE

92168112

COMMENT

Contact: Kerlavage AR

The Institute for Genomic Research
932 Clopper Road, Gaithersburg, MD 20878
Tel: 3018699056
Fax: 3018699423
Email: arkerlavage@igf.org

FEATURES
Source Location/Qualifiers

1..336
/organism="Homo sapiens"
/clone="HFBCH66"
mrna
/gene="D0S96E"
gene
<1..>336
/gene="D0S96E"

BASE COUNT 78 a 105 c 97 g 53 t 3 others
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Query Match 25.2%; Score 263; DB 12; Length 336;
Best Local Similarity 91.8%; Pred. No. 0.00e+00;

Matches 302; Conservative 0; Mismatches 24; Indels 3; Gaps 3;

Db 3 AAGCCGAGGGGGAGGCAAGATGACATCACCTCTCTTACTTCATCTGCTGGGAC 62
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QY 631 aagccgagggggaatggaatatgatatcaccccttgacttcatctgctgagac 690
Db 63 ACCCTGAGCACCACCCAGAGAGAGCTGAACACAGATGAGATGGCTGGAGTGC 122
|||
QY 691 accctgagtgccaccagagagagagagctgacacagatcagatgagctgagtgac 750
Db 123 AAGATCAGCGGCTGCCCATGATCCCGTGTACATCTCTCCCGAGAGTGCCTTGG 182
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QY 751 aagatcactgagtgcccatgacccatgacatctctctcgcgagagtgctctg 810
Db 183 ATGACTGGGTCACAGAGAGAGATCAACACAGGCGACAGGCGCAAGTTCTTGCNCTG 242
|||
QY 811 atgactggtgtacagagagagagacatcaacgagacacgagcttcttgcct-gcat 869
Db 243 CAAGAGAGTACAGGCTCTCTGTGCTGTACCGGCGGCGGCGGCGGCGGCGGCGG 302
|||
QY 870 caagagagagcagagctctctgctgctgacagcggg-gcagcaccacccaa-gcagag 927
Db 303 TTTCTGACATGAGAGACCATTAAGCAG 331
|||
QY 928 ttctgacatcgagagaccgtaagcag 956

Search completed: Mon May 4 13:18:39 1998
Job time : 2682 secs.

QY 607 gacggcaagatgcacatcacccctctgtgacttcacatcgctgacctgggaacccctgagcacc 666
DB 685 ACCGAGAAAGAGAGCTGAGACCAAGAGTACAGATGAGGCTGAGTGAAGTACAGCGC 744
|||||
QY 667 acccgaagaagagctgacacacagatgacagatggtgtgacgtgacgtgacgtgacgtgac 726
DB 745 TCCCCCATGATCCCTGCTACATCTCTCCCGGAGAGAGTGCCTCTGATGAGTGGGTC 804
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QY 727 tgcacacatgacccctgtgacacatctctcccgagagagtgctctgtgacgtgacgtgac 786
DB 805 ACAGAGAAAGATCAAGGAGGAGCAGGAGGAGTCTTTCGCTGATCAAGAGAGTGC 864
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QY 787 aagaagaagaacatcaagaggagcagcagatctctgtgacatcaagaagagtgac 846
DB 865 GGCCTCTGCTGCTGATCCG 924
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QY 847 ggtctctgtgctgtgacgagcgagcgagcgagcgagcgagcgagcgagcgagcgagcgag 906
925 GACCATTAAGCAGGCGCTCCACGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 984
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907 gaccataagcagcgctcacaacgcccctgtgacacatgcaaaaaagcctcagaaggtt 966
DB 985 TCGACTGGCGCGCTGATCAAGCAGGAGTCTTTCGCTGATCAAGAGAGTGC 1043
QY 967 tgcactgtgacgctcgtgacacatctctctgtgacacatgcaaaaaagcctcagaaggtt 1025

RESULT 4
LOCUS RNU14526 969 bp mRNA ROD 21-SEP-1994
DEFINITION Rattus norvegicus tissue inhibitor of metalloproteinases-2 mRNA
(TIMP-2) mRNA, complete cds.
ACCESSION U14526
NID 9540204
KEYWORDS Norway rat.
SOURCE Rattus norvegicus
ORGANISM Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
Murinae; Rattus.
REFERENCE 1 (bases 1 to 969)
Cook, T.F., Burke, J.S., Bergman, K.D., Quinn, C.O., Jeffrey, J.J. and
Partidge, N.C.
Cloning and regulation of rat tissue inhibitor of
metalloproteinases-2 in osteoblastic cells
Arch. Biochem. Biophys. 311 (2), 313-320 (1994)
2 (bases 1 to 969)
Partidge, N.C.
Direct Submission
Submitted (08-SEP-1994) N.C. Partidge, Saint Louis University
School of Medicine, Department of Pharm. and Physiol. Sci., 1402
South Grand, St. Louis, MO 63104, USA
FEATURES
Source
1..969
/organism="Rattus norvegicus"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
/clone="prr4"
/clone_lib="DMR 106-01 library of N.C. Partidge"
/cell_line="DMR 106-01 rat osteosarcoma"
/cell_type="osteoblast"
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1..208
209..871
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/product="tissue inhibitor of metalloproteinases-2"
/db_xref="PID:9540205"
/translation="MGAARTLRALGILLATLRPADSCSPVPOAFCNADY
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mat_peptide 287..868
3'UTR 872..969
polya_site 961..966
BASE COUNT 211 a 298 c 289 g 171 t
ORIGIN
Query Match 59.1%; Score 611; DB 14; Length 969;
Best Local Similarity 90.9%; Pred. No. 0.00e+00;
Matches 701; Conservative 0; Mismatches 66; Indels 4; Gaps 1;
DB 202 GCCCGCATGCG 261
QY 246 gccgcacatggtggtggtggtggtggtggtggtggtggtggtggtggtggtggtggtggt 305
DB 262 CAGCGTGTGCG 321
QY 306 gacgtgtgtggtggtggtggtggtggtggtggtggtggtggtggtggtggtggtggt 365
DB 322 TTGCAATGCAAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 381
QY 366 ttgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgca 425
DB 382 GAATGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 441
QY 426 aatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgcaatgca 485
DB 442 GTTCAAGAGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 501
QY 486 gtcaagagctgtgag 545
DB 502 CGGGTCTGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 561
QY 546 tgggtctgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctg 605
DB 562 AGATGCAAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 621
QY 606 ggaag 665
DB 622 CACCCAG 681
QY 666 caccag 725
DB 682 CTGCGCTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 741
QY 726 ctgcccatagacccgtgtgacacatctctcccgagagagagagagagagagagagagag 785
DB 742 CACAG 801
QY 786 cacaag 845
DB 802 TGGTCTTGGCGGTGTGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 861
QY 846 cgtctctgt 905
DB 862 GGACCCCTAAG 917
QY 906 ggaacataagcagcctcacaacgcccctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 965
DB 918 TCAGACTGTGACAGCTTGTGACATCCTCTCGAAGAGAGATGAATGAAC 968
QY 966 ttgactgtgtcagctgtgacatctctctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 1016

RESULT 5
LOCUS S82718 1007 bp mRNA ROD 12-MAR-1997
DEFINITION TIMP-2-testicular tissue inhibitor of metalloproteinases-2 [rats,
Sprague-Dawley, testis, mRNA, 1007 nt].
ACCESSION S82718
NID 91881813
KEYWORDS

SOURCE	Rattus sp., testis Sprague-Dawley.
ORGANISM	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrates; Euthera; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
REFERENCE AUTHORS TITLE	Grima,J.; Calciagno,K. and Cheng,C.Y. Purification, cDNA cloning, and developmental changes in the steady-state mRNA level of rat testicular tissue inhibitor of metalloproteinases-2 (TIMP-2) <i>J. Androl.</i> , 17 (3), 263-275 (1996)
JOURNAL MEDLINE REMARK	GenBank staff at the National Library of Medicine created this entry [NCBI gi8136q 179018] from the original journal article. This sequence comes from Fig. 2A. Location/Qualifiers 1..1007
FEATURES	/organism="Rattus sp." /db_xref="taxon:10118" 219..881 /gene="TIMP-2" 219..881 /name="TIMP-2" /note="testicular tissue inhibitor of metalloproteinase-2; this sequence comes from fig. 2A"
CDS	/codon_start=1 /product="TIMP-2" /db_xref="PID:g1881814" /translation="MGAARSLRLALGILLATLRLPADSCSPVHPQAFCAADV, IIRAGSEKEVDNSNDYIKNRIKIOYEIKNIKFKGDPIETPLASAVGVSEL, DVGRKKELINGKAEGDKMHITLDIFVPDPTLSIQKSILNHRYOMGCCKLTRDP, MIQCIVSSPDCLMDMTVERKSINHQAFFACKIRSOGSAMWIRGAAPROEIDLE DP"
BASE COUNT	236 A 302 C 294 G 175 T
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Query Match	59.1%; Score 610; DB 14; Length 1007;
Best Local Similarity	91.1%; Pred. NO; 0.00e+00;
Matches 704; Conservative	0; Mismatches 64; Indels 5; Gaps 2;
Db	212 GCCCCCATGGGCCCGCCGCGCAGACCTTCGCGTGTGTTCTGCTGTGAC 271
Oy	 246 gcccgccatggcgcgccccgccacacctgtggctgagtccttcttgctggc 305
Db	272 CAAGTGCTGCGCCC CGCGCACGCTGTGACGTCTCCCCGATTGACAACGAGCGCTT 331
Oy	 306 gacgctgtccgcgcgcgaccgactgtcacgtctcccgcgtgaacccgcaacagcgct 365
Db	332 TTGCATGTCAGACTGATGATCAGGCGCCAAACAGTAGACGAGAAGAGGTGGATTCCGG 391
Oy	 366 ttgcatgtcagtgttagtatgataggccaagaacytgtcagtgaaagagttgaccttgy 425
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Oy	 426 aaagacatctatggacaaccaatcaaagagatccagtatsagatcaaacagataaat 485
Db	452 GTTCAAAGAACCTGCACAAAGACATGGAATTTATCTACAGGCGCCCTCTCAGCAGTGTG 511
Oy	 486 gttaaagagccttgaaaagatatagatttactaacaagccctctcgtcgagtgtyg 545
Db	512 CGGGCTTCGTGAGAGCTTGAGAGAAAAGANAATCTAATTGACAGGAGCGGAAG 571
Oy	 546 tggggtctgcctggagcgttggaagaaagaataatcatacttgacagaaggtgaccttgy 605
Db	572 AGATGGCAAGATACCATTCACCTCTGTGACATTATGTGGCCCTGGGAGACGCTTAGCAT 631
Oy	 606 gaagcgaagatgacaataccctctgtactltaacgtcgtcccttggaacaccttgagac 665
Db	632 CAACCCAAGAGAGAGCTTAACACACAGAGTACAGATGGGCTCGAGTGCATACACAG 691
Oy	 666 caaccagaagaagagcctgaaaccacagytaccagatgaggtctgagtgtaaatcaagyg 725
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[illegible]

RESULT	6	1009 bp	NRNA	ROD	05-JAN-1995
LOCUS	S72594				
DEFINITION	TIMP-2-tissue inhibitor of metalloproteinase type 2 [rats, Fischer PC Cl 3 cell line, mRNA, 1009 nt].				
ACCESSION	S72594				
NID	g619232				
KEYWORDS	Rattus sp. Fischer PC Cl 3 cell line.				
SOURCE	Rattus sp.				
ORGANISM	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.				
REFERENCE	1 (bases 1 to 1009) Santoro,M., Battaglia,C., Zhang,L., Carlomagno,F., Martelli,M.T., Salvatore,D. and Fusco,A. Cloning of the rat tissue inhibitor of metalloproteinases type 2 (TIMP-2) gene: analysis of its expression in normal and transformed thyroid cells thyroid cells Exp. Cell Res. 213 (2), 398-403 (1994)				
JOURNAL	Genbank staff at the National Library of Medicine created this entry [NCBI g1bbsq 153441] from the original journal article.				
MEDLINE	94326839				
REMARK	Location/Qualifiers				
FEATURES	1..1009				
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CDS					
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ORIGIN					
Query Match	59.1%; Score 610; DB 14; Length 1009;				
Best Local Similarity	91.1%; Pred. No. 0.00e+00;				
Matches 704; Conservative	0; Mismatches 64; Indels 5; Gaps 2;				
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QY	246	gccgcgcataaggcgccgcgcgcgcacacctgagctgagcgcgcctctctgctgtgc	305		

Db	283	CACGTCGTGGGCCCGGCAGCCGCTGAGCTGCTCCCGGTGCACCGGCAACAGGGTT	342
Oy	306	gaagctgttgcgcccgcgcacgcttgaaagtgtctcccgyltcaccgcgaacaggcgtt	365
Db	343	TTGCATGCAGACGTAAGTGAATCAGGGCCAAAGACAGTGACGAGAAGAGGTGGATTCCG	402
Oy	366	ttagcatgcagatgtaagatcaaggccaagaacggttcagtagaaggaaagtggactctgg	425
Db	403	GAAATGACATCTAATGGCAACCCCATTCAGAGATTCATATATAGATCAAGACAGATAAAGAT	462
Oy	426	aaacgaccttaatgcaaacccattcaagaagatccaatatgatatacaagcataaagat	485
Db	453	GTTCAAAGACTGTGACAAGACATCGAATTTATATCACAGGCCCCCTCCTCAGACAGTGTG	522
Oy	486	gttcaaaagggccttaagaagatatagaatttatctacaagccccctcttcggaaagtgtg	545
Db	523	CGGGGTCTCGCTGGACGTGGAGAAAAGMAAGAAATATCTAATTCACAGGAAGCGGAGAG	582
Oy	546	tggggctcgttgtgaagcttggagaagaagaatctcatctcattgcaggaaagcggagg	605
Db	583	AGATGGCAAGATGCACATTAACCTCTGTGACTTATATGTGCTCCCTGGACACGCTTACAT	642
Oy	606	ggacgycgaagatgacalcacaccctctgtacttcatctgtgcccttggacacccctga	665
Db	643	CACCCAGAAGAAGGACCTAAACACAGGTATACAGTACAGTGGGCGGAGAGCAAGATCACA	702
Oy	666	caccagaagaagaagccttgaaccacaagttaccagaatggctcgagtgcaagatacacgcg	725
Db	703	CTGGCCATATGATPCCATGCTACATCTCCTCCCGAGTAGAGTGCCTGTGATGACCTGGT	762
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Db	763	CACAGAGAAAGCATTCATATGGGCAACACAGGCCCAAGTCTTTGCTGCATCAAGAGACATGA	822
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Db	823	TGATTCCTGGCCGAGGATACCGCGGGGGGGCAACCCCGCAAGAGAGATTTTTCGACATCGA	882
Oy	846	cggctcctctgtcggtgataccggcgcgcgcccccaagaagaagtgttctgcagatcga	905
Db	883	GGACCCGTTAAGCAGCTGACAGACACCCCTGTGGCCAATTG---AAAGCCTGTGAGGG	938
Oy	906	ggaccataagcaagcctctccaagcccc-tgtgcccacatgcgaaaaaagccttccaagg	964
Db	939	TTCACTGCTGCAGCTTTGACATCCCTCTCGGAAAACAGCATGAATAAACA	991
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Best Local Similarity	90.7%; Pred. No. 0.00e+00;	
Matches	700; Conservative 0; Mismatches 68; Indels 4; Gaps 1;	
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QY	246 gccgcgcatgggcgcgcgcgcgcgcgcgcctgcgcgcctgcgcctgcgcctgcgc	305
Db	270 CTCGCTCGTGGCGCCGCGCGCGCTCGAGCTGTCTCCCGGTGACCGCGAAGCGGCTT	329
QY		
QY	306 gacgtgcttgcgcgcgcgcgcgcgcgcctgcgcctgcgcctgcgcctgcgcctgcgc	365
Db	330 TTGCAATGCAGACGCTAGTGTAGAGGCCAAAGAGTGAAGCGAGTGTCCGG	389
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QY		
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Db	510 CGGGGTCTCGCTGGACGCTTGAGAGAAAGAGACTATCTAATTGACAGAAAGCCAGAG	569
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[illegible]

RESULT	8		
LOCUS	MMTMP2	1714 bp	RNA
			ROD
			30-JUN-1993

DEFINITION M.musculus TIMP-2 mRNA for tissue inhibitor of metalloproteinases,

ACCESSION	X62622	S37984
NTD	g54801	

WORDS	inhibitor of matrix metalloproteinases; TIMP-2 gene; tissue inhibitor of metalloproteinases, Type 2.
RCE	house mouse.
ORGANISM	Mus musculus

REFERENCE 1 (bases 1 to 1714)
AUTHORS Shimizu, S.
TITLE Direct Submission
JOURNAL Submitted (14-OCT-1991) S. Shimizu, Pathophysiology Unit, Aichi

REFERENCE AUTHORS	TITLE	JOURNAL
2 (bases 1 to 1714) Shimizu, S., Malik, K., Sejima, H., Kishi, J., Hayakawa, T. and Koizumi, O.	Cloning and sequencing of the cDNA encoding a mouse tissue inhibitor of metalloproteinase-2	Gene 114 (2), 291-292 (1992)

FEATURES	Location/Qualifiers
source	1. .1714

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CDS

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Type 2"						

Query Match	58.98;	Score 608;	DB 14;	Length 1714;
Best Local Similarity	90.7%;	Pred. No. 0.00e+00;		
Matches 700;	Conservative 0;	Mismatches 68;	Indels 4;	Gaps 1;

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D	b	280	ctgcgctcg3gcgcccgcggccagacctgcagctgcgctcccccgtgcacccgaa3gcgctt	333
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Q	y	786	cacacagaagaa3agacctgcacacacagagcttaccagattggcctg3tg3agtgacagatctgcg	844
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D	b	936	ttagactgcgtccagcttgacatcccttctgcgaa3acagatgataaaca	987
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RESULT	9	BOVNET	1047 bp	MRNA	MAM	15-SEP-1990
LOCUS						

DEFINITION Bovine metallopeptidase inhibitor mRNA, complete cds.

NID 9163341

SOURCE Bovine aorta endothelium, cDNA to mRNA.

Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Actinopterygia; Pinnipedia; Rodentia; Bovidae; Canidae; Felidae; Carnivora; Mammalia; Eutheria.

Bovidae; Bovinae; Bos
1 (bases 1 to 1047)

AUTHORS	Boone, T.C., Johnson, M.J., De Clerck, Y.A. and Langley, K.E.
TITLE	cDNA cloning and expression of a metalloprotease inhibitor

related to tissue inhibitor of metalloproteinases
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 87, 2800-2804 (1990)

MEDLINE
9020/285
COMMENT
Draft entry and computer-readable sequence [1] kindly submitted by

FEATURES K.E.Langley, 23-FEB-1990, for release after publication.

Location/Qualifiers

1. .1047

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291 .953

/note="metalloproteinase inhibitor precursor"

/codon_start=1

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291 .368

/note="metalloproteinase inhibitor signal peptide"

369 .950

/note="metalloproteinase inhibitor"

1042 .1047

POLYA_signal

220 a 350 c 312 g 165 t

JIN

Query Match

Best Local Similarity 89.68; Score 599; DB 15; Length 1047;

Matches 706; Conservative 0; Mismatches 77; Indels 5; Gaps 1;

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227 CCGCGCGCCCGCCCGCCCGCCCGCCCGCCCGCCCGCCCGCCCGCCCGCCG

325 TCTGCT

287 TCGGCT

385 TGCACCCGACAGCGGTTTGCATGACAGCATATGATGACAGCGCCCAAGCAT

347 TGCACCCGACAGCGGTTTGCATGACAGCATATGATGACAGCGCCCAAGCAT

445 AGAAGAGGTGACTCTGACATCTACGACATCTACGACATCTACGACATCTACG

407 AGAAGAGGTGACTCTGACATCTACGACATCTACGACATCTACGACATCTACG

505 AGATCAAGCAGATTAAGATGTTCAAGGACCTGATCAGACATAGATTATCTAC

467 AGATCAAGCAGATTAAGATGTTCAAGGACCTGATCAGACATAGATTATCTAC

565 CCCCCCCCCCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT

527 CCCCCCCCCCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT

625 TTGCAGGAGAGCGCGAGGAGATGAGCATATGATGATGATGATGATGATGATG

587 TTGCAGGAGAGCGCGAGGAGATGAGCATATGATGATGATGATGATGATGATG

685 CCGGAGACACCTGAGTGGCCACCCAGAGAGAGCTGAACCAAGATGATGATG

647 CCGGAGACACCTGAGTGGCCACCCAGAGAGAGCTGAACCAAGATGATGATG

745 GTGAGTGAAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT

707 GTGAGTGAAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT

805 GCGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG

767 GCGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG

865 CCGCATCAAG

827 CCGCATCAAG

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DB 984 ----ACAGTGTCCAGAGTTCAGAGTGTCCAGAGTTCAGAGTTCAGAGAGCA 1039

QY 947 aaaaaagctcccaagaggttcgactgctgacagctgacatccctctctggaaga 1006

DB 1040 TGAATATA 1047

QY 1007 tgaataaa 1014

RESULT 10

LOCUS RATTIMP 958 bp mRNA ROD 21-DEC-1995

DEFINITION Rattus norvegicus matrix metalloproteinase inhibitor (TIMP-2) mRNA,

complete cds.

ACCESSION L31884

KEYWORDS 91411729

SOURCE Rattus norvegicus (tissue library: lambda gt10) female mammary cDNA

to mRNA.

ORGANISM Rattus norvegicus

Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota;

Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;

Murinae; Rattus.

REFERENCE 1 (bases 1 to 958)

Gibbons,K.L., O'Grady,R.L. and Piper,A.A.

Rat tissue inhibitor of metalloproteinases-2: cDNA cloning and

sequence analysis

Unpublished (1994)

FEATURES

Location/Qualifiers

1. .958

/organism="Rattus norvegicus"

/db_xref="taxon:10116"

/cell_type="carcinoma"

/sex="female"

/tissue_type="mammary"

/tissue_id="lambda gt10"

1. .208

209 .871

/gene="TIMP-2"

209 .286

/gene="TIMP-2"

209 .871

/gene="TIMP-2"

/codon_start=1

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(type 2)"

/product="matrix metalloproteinase inhibitor"

/db_xref="PID:91411730"

/translation="MGAARSLPLAFCLLLGLTLPLRADACSPVHPQAFNCADY

IRAKVNRKEDVSGNDIYGNPKRIQYETIKRMRKGPDPDIEFTYAPAAVGSVL

DIGRKEVYLAKRAGNMMHTLDCFIYPMPTLSHTQKSLNHRQMGCEKTRCP

MIPTIISPDCLMDWYETKNIHNGHQAFFACIKRSDSCAMYGAAAPPKQEPDLIE

DP"

287 .868

/gene="TIMP-2"

/function="tissue inhibitor of matrix metalloproteinase

(type 2)"

/product="matrix metalloproteinase inhibitor"

Query Match

Best Local Similarity 57.7%; Score 596; DB 14; Length 958;

Matches 691; Conservative 0; Mismatches 65; Indels 5; Gaps 2;

202 GCCCGCATGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG

246 gccgcacatggcg

262 CACGCTGCTGCGCCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG

321


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OY 306 gacgctgctcgcccgccgacgctgacgtctcccccgtgacccgcaacagcgct 365
DB 322 TTGCATGAGACGATGATATGAGGCGCAAGACATGACCGAAGAGAGATGATCCGG 381
OY 366 tgcgcatgagatgtagtgcatacgccaaacgagcagtgagaaagtgactctg 425
DB 382 GAATGACATCTATGCGAACCCCATGAGATTCATTAATAGATCAACAGATAAAGAT 441
OY 426 aaagacatttttggaacccatcaagaagatccagatgagatcaagacataaagat 485
DB 442 GTTCAAGAGACTGACAGAGACATGCAATTTATCTACAGCGCCCTCTCTGACAGCTGTG 501
OY 486 gtccaagagcgagaaagatagatttctacacgccccctctctcgagtgctg 545
DB 502 CCGGCTCTGCTGACGCTTGAGGAGAAAGAAATCTAATTTGACGAGGAGCGGAAG 561
OY 546 tggggctctgcgagcgttgaggaagaagaatctccatctcaggaagcgagag 605
DB 562 AGATGCAAGATGACATATACCTCTGTGACTTTATTTGCTTGCGGACAGCTTGACAT 621
OY 606 ggaagcgaagatgacatcacctctgtgacttcacgtgacctgagacacctgagcac 665
DB 622 CACCCAGAAAGAGCCTTAACACACAGTACAGATGGCTGCGAGTGCAGATCACAG 681
OY 666 caccagaagaagagcctgaaccacaggtaccagatggctgagtgacagatcacg 725
DB 682 CTGCCCTATGATCCATGCTATCATCTCTCCCGATGATGCTGCTGATGATGAGTGGGT 741
OY 726 ctgcccacagatccgctgtagatctcctcccgagagtgctgctgagtgactggt 785
DB 742 CACAGAGAGACATCAATAGGCGACCGACCAAGTCTTTCCTGCTGATCAAGAGATGA 801
OY 786 ccaagagaagaacatacaagggcaccagacaggtcttcgctgataagaagaagtga 845
DB 802 TGGTCTTCGCGGTGTACCGCGGGGCGACCCCGAAGACAGAGTTCCTTGATCACTGA 861
OY 846 cggctctgtgctgtagcagcgcgcgcccgcaagagatctctcagatcga 905
DB 862 GACCCCGTAGAGAGGTGACAGAGCCCTCGCGGCAATTG-----AAAAGCTCTAGAG 917
OY 906 ggaacataagagagcctccacagcccc-tgtgccaactgcaaaaaagcctccagag 964
DB 918 TTACAGACTGCTCAGCTTGACATCCCTTCCTGGAACAGC 958
OY 965 ttgcagctgctcagctcgaacatccctccctcggaaacagc 1005

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RESULT 11
US MUSTIMP2B 676 bp mRNA ROD 19-AUG-1992

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PRINTION M.musculus metalloproteinase inhibitor (TIMP-2) mRNA, complete cds.
ACCESSION M93954

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NID 9202053
KEYWORDS metalloproteinase inhibitor.
SOURCE Mus musculus (strain C3H) CDNA to mRNA.
ORGANISM Mus musculus

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REFERENCE 1 (bases 1 to 676)
AUTHORS Leco K.J., Hayden L.J., Sharma R.R., Rochelleau H., Greenberg A.H.
and Edwards D.R.

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TITLE Differential regulation of TIMP-1 and TIMP-2 mRNA expression in
normal and Ha-ras-transformed murine fibroblasts
JOURNAL Gene 117, 209-217 (1992)
MEDLINE 92347695
FEATURES

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Location/Qualifiers
1..676
/organism="Mus musculus"
/strain="C3H"
/db_xref="taxon:10090"
/cell_line="C3H 10T1/2"
/cell_type="fibroblasts"

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/gene="TIMP2"
CDS 9..671
/gene="TIMP2"
/codon_start=1
/function="metalloproteinase inhibitor"
/evidence="experimental"
/product="TIMP-2"
/db_xref="PID:9202054"
/translation="MGAARSLRLAHLILLASLRPADCSPEVPOAFNADV
IRAKVSEKVDGNDIYNPIKROYEIKQIKERKDPKIDIEFYTPSSAVGSL
DVGKERELIAGKAGDGMHTLDDFIYPMDTLSITOKSLNHRVOMGCECKITRC
MIPCYISPDCLMDWVTEKINSINHOKFACIERSDSCAMWYGAAPPROEFLDIE
DP"
BASE COUNT 162 a 189 c 199 g 126 t
ORIGIN

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Query Match 54.4%; Score 562; DB 14; Length 676;
Best local similarity 91.6%; Pred. No. 0.00e+00;
Matches 619; Conservative 0; Mismatches 57; Indels 0; Gaps 0;

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DB 1 GGGCCGCATGGGCGCGCGCCGACAGCTCCGGTGGCGACAGGCTCTGCTGAG 60
OY 245 ggcgcccatgagcgccgagcgccgacacctgagctgagctgagctgagctgag 304
DB 61 CCGGCTCTGCTGACGCTTGAGGAGAAAGAAATCTAATTTGACGAGGAGCGGAAG 120
OY 305 cgaagctgctcgcccgccgagcctgagctgagctgagctgagctgagctgag 364
DB 121 TTGCATGACAGACATGATGATGATGATGATGATGATGATGATGATGATGATGAT 180
OY 365 ttgcattgacagatgagatgagatgagatgagatgagatgagatgagatgagatg 424
DB 181 GGAATGACATCTATGCGAACCCCATCAAGAGATTCATGATGATGATGATGATGAT 240
OY 425 gaacgacattatgagcaacctcaagaagatccagatgagatgagatgagatgag 484
DB 241 TGTTCAGAGACTGACAAAGACATGAGTTCATGACAGGCGCTCTGACAGCTGT 300
OY 485 tgttcaagagcctgagagatagatgagatgagatgagatgagatgagatgagat 544
DB 301 GCGGGGCTCTGCTGAGCTTGAGGAGAAAGAGATTCATGATGAGGAGGAGAGAG 360
OY 545 gtggggtctcgtcgagcgttgaggaagaagaatctcattgaggaagaagcgag 604
DB 361 GAGATGACAGATGACATTAACCTCTGTGACTTCATTTGCTCCCTGGAGACAGCTT 420
OY 605 ggaagcgaagatgacatcacctctgtgacttcacgtgagctgagctgagctgag 664
DB 421 TCACCCAGAGAGAGACCTGAGACACAGTACAGATGGCTGTGATGATGATGATGAT 480
OY 665 ccaccagaagaagagcctgaaccacaggtlacagatgagctgagctgagctgag 724
DB 481 GCGTCCCATGATCCCTGCTATCATCTCTCCCGATGATGATGATGATGATGATGAT 540
OY 725 gctgcccatgacccggtctacatctcctcccgagcagtgagctgagctgagctg 784
DB 541 TCACAGAGAGAGACATTAAGGCGACACAGGCAAGTCTTTCGCTCATGAGAGAGTG 600
OY 785 tcaagagaagaacatcaacagggcaccagggcagaagctctgctgctgacatgaaga 844
DB 601 ATGCTTCTGCGCGGTGTACCGCGGGGCGACCCCGCAAGAGATTCCTTGATGATG 660
OY 845 acgagctgctgctgagctgagcggcgcccgcccaagcagagttctcagacatg 904
DB 661 AGGACCCATTAAGCAGG 676
OY 905 aggaaccataagcag 920

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RESULT 12
LOCUS HSTIMP2M 555 bp RNA PRI 24-APR-1992

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DEFINITION	H. sapiens mRNA for tissue inhibitor of metalloproteinases, Type-2.
ACCESSION	X54533
NID	937180
KEYWORDS	TIMP-2; tissue inhibitor of metalloproteinases, Type 2.
SOURCE	human.
ORGANISM	Homo sapiens
REFERENCE	Eukaryotes: mitochondrial eukaryotes; Metazoa: Chordata: Vertebrata; Eutheria: Primates; Catarrhini; Homiidae; Homo. 1 (bases 1 to 355)
AUTHORS	Malik, K.T.A.
TITLE	Direct Submission
JOURNAL	Submitted (20-AUG-1990) Malik K.T.A., Biotechnology Division, Fujii Chemical Industries, 530 Chokelji, Takaoka City, Toyama 933, Japan
REFERENCE	2 (bases 1 to 555)
AUTHORS	Malik, K., Sejima, H., Aoki, T. and Iwata, K.
TITLE	Nucleotide sequence of a TIMP-II cDNA
JOURNAL	Unpublished
FEATURES	
source	Location/Qualifiers 1..555 /organism="Homo sapiens" /db_xref="taxon:9606" /cell_line="GIN-1" /clone_lib="human fibroblast"
misc_feature	1..20 /gene="TIMP-2" /note="cloning primer-derived (5')" <1..>555 /gene="TIMP-2" /codon_start=1 /product="tissue inhibitor of metalloproteinases, Type-2" /db_xref="PID:937181" /db_xref="SWISS-PROT:P16035" /translation="SPVHPQAFCANADVIVIRAKAVEKEVDSNDIYGNPIKRIQYE KQIKMFKEPNDIEPIYAPASSVYGVSDVGGKREYLLAGKAEKGKMTLLCDPT PMDTISTOKSLNHRQMGCECKTIRCPMPCYIISPDCLMMDWTEKRNHQA EPACIKRSDSGCAWRAAPRQEP"
gene	1..555 /gene="TIMP-2" 547..555 /gene="TIMP-2"
misc_feature	/note="cloning primer-derived (3')"
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Query Match	52.3%; Score 540; DB 27; Length 555;
Best Local Similarity	98.7%; Pred. No. 0.00e+00;
atches	547; Conservative 0; Mismatches 7; Indels 0; Gaps 0;
1	TCTCCAGTGCACCCACACAGCGCGTTTGCAATGCAGATGTAGTATCAGGCGCCAAAGC 60
QY	340 tccccggtgtgcacccgcacaaagcgcttttgcaatgcagatgtagatcagagccaaagcg 399
Db	61 GTCACTGGAAGAGAGTGTGACTGTGAAAGCAATTTATGGAACCCATTCAAGAGGATC 120
QY	400 gtccagtgaagaagaatgtgacatcttggaagaacattatgcaacccattcaagaagatc 459
Db	121 CAGTATGAGATCAAGCAGAGTAAAGATGTTTCAAGGGCGCTGAGAAGGATATGAGATTATC 180
QY	460 cagtatgagatcaagcagataaagatggtccaagggcctgagaagatatagattatc 519
Db	181 TACAGCGCCCCCTCTCGGTAGTGTGTGGGGTCTCACTGGACGTTGGAGGAAGAAAGAA 240
QY	520 tacacggccccctctcctgcagtggtgtggtgtctcgtgacgttggagaagaagaa 579
Db	241 TATCATTTGACGAGAAAGCGCGGAGGGAACGCAAGATGCACATCAACCTCTGTGACTTC 300
QY	580 tatccatctgcaggaagcgagggggaaggaagatgacatcacccctctgtgacttc 639
Db	301 ATCGTGCCCTGGGACACCTGTGAGCACACCCACCAAGAAAGAGCTGAACACAGGTACAG 360
QY	640 atcgtgcctctggagaccccttgagcacacacccagaagaagagccttgaaacacagttacag 699
Db	361 ATGGGCTGGGATGCAAGATCACGCGCTGCCCATATGATCCCGTGTCAATCTCTCCCGC 420

QY	700	atggagctgagagtgcaaatcaccgctgcgcgcccaagatccggtgtacattctctccccg	759
Db	421	GACGAGTGTCCCTCTGGATAGACTGGGTCCACAGAGAAGACATCAACGGGACACAGGCCAAG	480
QY	760	gacgagtgctctgtgactggtgtccagagaagaacatcaacgagcaccagcgccag	819
Db	481	TTCCTCCCTCCTCATCAGAGAAGTGCAGCGCTCTGTGCGTGTCACCGCGCGCGGCC	540
QY	820	tcttcgctgcatacaagaagatgcagcgtctctgtcgtgtacgcgagcgcgcc	879
Db	541	CCCAAGCAAGATT 554	
QY	880	cccaagcagagatt 893	
RESULT	13		
LOCUS	CGRNAP	597 bp	RNA
			ROD
			25-NOV-1993
DEFINITION	C. longicaudatus mRNA for tissue inhibitor of metaro proteinase.		
ACCESSION	X75924		
NID	g414876		
KEYWORDS	tissue inhibitor of metaro proteinase.		
SOURCE	long-tailed hamster.		
ORGANISM	Cricetulus longicaudatus		
REFERENCE	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae; Cricetinae; Cricetulus.		
AUTHORS	1 (bases 1 to 597)		
REFERENCE	Suzuki, Y.		
JOURNAL	Unpublished		
AUTHORS	2 (bases 1 to 597)		
TITLE	Suzuki, Y.		
JOURNAL	Direct Submission		
FEATURES	Submitted (02-NOV-1993) Y. Suzuki, Suntory Pharm-Tech Center, 370-05 Atsuka 2716, Chiyoda-machi, Ohra-gun, Gumma, JAPAN		
source	Location/Qualifiers		
	1..597.		
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	/clone_id="Chinese hamster ovary"		
	/clone="X1"		
	/cell_type="Ovary"		
	<1..593		
	/codon_start=3		
	/product="tissue inhibitor of metaro proteinase"		
	/translation="RACSCSPVHPQAFNCADYVIRAKAVSEKVDGNDIYGNPIKR		
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	GHQAFPAICIKRBDSCAWYRGAAAPRQFELIDEDP		
	primer_bind		
	1..35		
	primer_bind		
	9..350		
	mat_peptide		
	9..590		
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	160 a 163 c 167 g 107 t		
	ORIGIN		
	Query Match		
	49.0% Score 506; DB 14; Length 597;		
	Best Local Similarity 93.2% Pred. No. 0.00e+00;		
	Matches 546; Conservative 0; Mismatches 40; Indels 0; Gaps 0;		
Db	6	GCTGTCAGCTCTCTCCCGGTGACCCGCAAGAGCGTTTTCATAGCAGAGTGTGATC	65
QY	328	gcctcgagctgtctcccggtgacccgcaaaagcgcttttgcattgcagatgtatgac	387
Db	66	AGGGCAAGCAGTGAAGCGAGAGAGGTGATTCCGGGAACGACATCATCGCAACCCC	125
QY	388	agggccaagcggtcagtgagaaagtgactctgaaacgacattatgcaacct	447
Db	126	ATCAAGAGATCCAAATYTGAGATCAGAGAGTAAAGATGTTCAAGGCCCTGACAAAGAC	185
QY	448	atcaagagatcccgatagatcaagcagataagatgttcaaaagggccugaaagat	507

D	b	186	ATCGAGTTTATTACACAGACCCTCCCTCAGAGTGTCGGGCTGTGCCTGAGACTTGA	245
O	y	508	atagagttaactcaacagggccccctccgcgacgtgtgttgggttcctcgtgaagttgga	567
D	b	246	GGAAGAAGAGCATCTAATTGCAAGAAAGCACAAGGGGATGCCAAGATGCACATTACC	305
O	y	568	ggaagaagaatattcatctatcttgccaggaaagcgaggggggaagatgatataacc	627
D	b	306	CTCTGTGACTTCATTGTGTGCTGCGCTGGGACACACTGACACACCCACAGAGAAGCCTGAAC	365
O	y	628	ctcttgacttcatctatctgtgcccttgagcacacctgagcacaccacaagaagaagcctgaac	687
D	b	366	CACAGATGCACGATGGGCTGGAGTGGCAAAGATCACACAGCTGCCCATATATCCACATAC	425
O	y	688	cacagatgcacgaatgtaggtgctgagtgcaaatcaacagcgctgcccataatcccggtcac	747
D	b	426	ATCTGCTCCCGGAGTAGTGTCTCTGATGTGACTGGGTGCACAGAGAAGCATCAACGGG	485
O	y	748	atctctctcccgagagatgtcctctgagtagctgtgtgtcaacagagaagaactcaaggg	807
D	b	486	CACCAAGCCAAAGTTCTTTCCTGCATCAAGAGAAGTAGACGCTCTTGGCGATGTATCCC	545
O	y	808	caccagcgcaagatctctcgtcgtcatacagaagaatgtagcgctcctgtgcygtacgcg	867
D	b	546	GGAGGGGACCCCTTAACAGAGATTTTCGACATCAGAGAACCCAT	591
O	y	868	ggcggcgccccccaagcagagattctctgcacatgagaccat	913
R	E	S	RESULT	LOCUS
D	b	14	568860	970 bp DNA PRI 22-SEP-1994
D	b	14	timp-2-metalloproteinase-2 tissue inhibitor [promoter] [human, Genomic, 970 nt].	
A	C	S	68860	
N	I	D	954538	
K	E	Y	WORDS	
S	O	R	C	human.
O	R	G	A	Homo sapiens
R	E	F	E	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata;
R	E	F	E	Vertebrata; Euteria; Primates; Carnivora; Homidae; Homo.
R	E	F	E	1 (bases 1 to 970)
R	E	F	E	De Clerck, Y.A., Darville, M.I., Beckhout, Y. and Rousseau, G.G.
R	E	F	E	Characterization of the promoter of the gene encoding human tissue
R	E	F	E	inhibitor of metalloproteinases-2 (TIMP-2)
R	E	F	E	Gene 139 (2), 185-191 (1994)
R	E	F	E	94156197
R	E	F	E	GenBank staff at the National Library of Medicine created this
R	E	F	E	entry [NCBI gidsq 143852] from the original journal article.
R	E	F	E	This sequence comes from Fig. 1A.
R	E	F	E	Location/Qualifiers
R	E	F	E	1..970
R	E	F	E	/organism="Homo sapiens"
R	E	F	E	/db_xref="taxon:9606"
R	E	F	E	576..>970
R	E	F	E	gene
R	E	F	E	822..970
R	E	F	E	/partial
R	E	F	E	/note="metalloproteinase-2 tissue inhibitor"
R	E	F	E	/gene="timp-2"
R	E	F	E	822..970
R	E	F	E	/partial
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R	E	F	E	/codon_start=1
R	E	F	E	/translation="MGAAARFLRLALGILLLATILLRPADACSCSPVHQAFQADAVG
R	E	F	E	KESDP"
B	A	S	E	BASE COUNT
O	R	I	G	151 A 360 C 372 G 87 T
O	R	I	G	ORIGIN
Q	U	E	R	Query Match
Q	U	E	R	Best Local Similarity 100.0%; Prid No. 3.96e-240;
M	A	T	C	Matches 376; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
D	b	576	GCCGCGCGTCCCCACCCCGCGCGCGCGCGGCGGAGATTGCGCCCGCGCCCTCCCTC	635

[illegible]


```

Db      361 AGTACGGCCTCTGTGGTGTTAGCCGCGGNGGCCCCCCCAAGACGAGTTTCAGAC   420
|       |||||||||
Zy      841 agtcaaggcttcctgtcgctggtacccgcgcgcgcgcgcgccccaagcagaagtcttcga   900
|       |||||||||
Db      421 ATCAGAGCACCATATAGAAGAGGCCTCCAAAGCCCTCTGTGGCCACTGTGCATAAAGAGCTC   480
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QY      901 atcgagaccataagtagcagcgtctcaacgcgcccttgycgaact-gtaaaaaa-gocct   958
|       |||||||||
Db      481 CAAGAGGTTTTCGACTGTGGTCCACTCTGACATCCCTT   518
|       |||||||||
QY      959 caa-gggtctt-cgact-gttcacgctctgacaacctt   993
|       |||||||||

RESULT          3
LOCUS           AA486280         467 bp        mRNA              EST             11-AUG-1997

DEFINITION      ab35908.s1 Stratiagene HeLa cell s3 937216 Homo sapiens cDNA clone
                M284846 3' similar to gb:S48568 TISSUE INHIBITOR OF
                METALLOPROTEINASES II PRECURSOR (HUMAN)..
                AA486280
                G2216496

WORDS           EST.
SOURCE          human.
ORGANISM        Homo sapiens
                Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata;
                Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae;
                Homo.
REFERENCE       1 (bases 1 to 467)
AUTHORS        Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S.,
                Kucaba,T., Lacey,M., Le,N., Lennon,G., Marra,M., Martin,J.,
                Moore,B., Schellenberg,K., Sepoon,M., Tan,F., Theisling,B.,
                White,Y., Wylie,T., Waterston,R. and Wilson,R.
TITLE           WashU-Merck EST Project 1997
JOURNAL         Unpublished (1997)
COMMENT         Contact: Wilson RK
                Washington University School of Medicine
                4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                Tel.: 314 286 1800
                Fax: 314 286 1810
                Email: est@watson.wustl.edu
                This clone is available royalty-free through LIND; contact the
                IMAGE Consortium (info@image.llnl.gov) for further information.
                Seq primer: -41m3 fwd. ET from Amersham
                High quality sequence stop: 451.
                Location/Qualifiers
                  1..467
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                   /note="Vector: pBluescript SK-; Site_1: EcoRI, Site_2:
                   XhoI; Cloned unidirectionally. Primer: Oligo dt. HeLa S
                   epitheloid carcinoma cells grown to semi-confluency
                   without induction. Average insert size: 1.5 kb; DN1-ZAP
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                   adaptor sequence: 5' CTGCACTTTTTTTTTTTTTTTT 3'"
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                   /lab_host="SOLR (kanamycin resistant)"
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BASE COUNT      78 a               142 g               119 t
ORIGIN
Query Match          44.4% Score 459: DB 25; Length 467;
Best Local Similarity 99.6%; Pred.No. 0.00e+00;
Matches 466; Conservative 0; Mismatches 1; Indels 1; Gaps 1;
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CP	956	ggcttttcttgagctggtccacagaggcgcttggagacctgtcttatgggttcctcagtgcg	897
Db	121	AGAACTCCTGCTTGGGGGGCGCCGCCG-CGCTTACACAGCACAGAACCCGTCACTTC	179
CP	896	agaactcctgtcttggggggcgccgcgcggtaccacagcagagccgtcattcttc	837
Db	180	TTGATGACGACGCACAATACTTGGCTGTGTCGCCCGTTGATGTCTTCTCTGTACCACAGTCC	239
CP	836	tgtatgcaggcgaaagaacttggcctcgtgcccgttgtaatgtttcttctctgtgccccagttc	777
Db	240	ATCCAGAGCAATCTCTCCGGGGAGAGANGTNGKACAGGGATCATGAGGCGACGCCGTGATC	299
CP	776	atccagaggaactcgtctccgggagagatgtatgcacgggatcatatgggcagcgcgtgac	717
Db	300	TTCGACTCGACACCCCATCTGTGTAACCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	359
CP	716	ttagcactcgacgccatctgtgtaactgtgttcaagcctcttcttctgtgtgtgtgtgtgtgt	657
Db	360	GTCGTCCAGGACGACATGAATGACACAGAGAGGTGATGTGATTTTCGCCGTCCCGCTCGGCC	419
CP	656	gtgtccagggagacatgaatgacacagagggatgcatctgtcgttcccccctcgtgc	597
Db	420	TTTCTGCAATGAGATATTCTCTTCTTCTCTCTCAACGTCCAGGAGACC	467
CP	596	ttctctgcaatgagatatcttcttcttcttctcctcacagctccagcgagacc	549
RESULT LOCUS	4 AA700818	464 bp mRNA EST	19-DEC-1997
DEFINITION	Z169f06.s1 Soares fetal liver spleen INFLS S1 Homo sapiens CDNA clone 436067 3', similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);.		
ACCESSION	AA700818		
NID	92703983		
KEYWORDS	EST.		
SOURCE ORGANISM	human. Homo sapiens Eukaryotes; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.		
REFERENCE	1 (bases 1 to 464)		
AUTHORS	Hallier,L., Allen,M., Bowles,L., Dubuque,T., Gelsel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Matira,M., Martin,J., Moore,B., Schellenberg,K., Stepec,M., Tan,F., Theisinger,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.		
TITLE	WashU-MCI human EST Project		
JOURNAL COMMENT	Unpublished (1997)		
FEATURES	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: estevatson.wustl.edu This clone is available royalty-free through LINL ; contact the IMAGE Consortium (info@image.lnl.gov) for further information. Seq primer: -40m3 fwd. ET from Amersham. Location/Qualifiers 1..464 "/organism='Homo sapiens' '/note='Organ: Liver and Spleen; Vector: pTZ73D (Pharmacia) with a modified polylinker; Site.1: Pac I; Site.2: Eco RI; This is a subtracted version of the original Soares fetal liver spleen INFLS library. 1st strand cDNA was primed with a Pac I - Oligo(dT) primer [5' AATCGAGAGAATTAATTAAGAATCTTTTTTTTTTTTTTTT 3'] double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Pac I and cloned into the Pac I and Eco RI sites of the modified pTZ73 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fátima Bonaldo . /db_xref='GDB:11335836'		

```

/db_xref="taxon:9606"
/clone="436067"
/clone_1b="Soares fetal liver spleen INFLS S1"
/sex="male"
/dev_stage="20 week post conception fetus"
/lab_host="DH10B (ampicillin resistant)"
77 a 123 c 143 g 121 t
BASE COUNT
ORIGIN

```

Query Match	43.48;	Score 448;	DB 29;	Length 464;
Best Local Similarity	99.68;	Pred. No. 0.00e+00;		
Matches 460;	Conservative 0;	Mismatches 0;	Indels 2;	Gaps 2;

Db 5 GGGATGAGTGTGTTTATTCATGCTGTTCACAGAAAGGATGTGCAGAGCTGGACCACTGCAA 64
|||||
Cp 1025 ggagatgagctgtttatccaatgctgtttccaggaagagatgcagagctgagccactcgaa 966
65 ACCCTTGGAGGCTTTTTTTCAGTGTGGCCACAGGGGGGTGGAGAGCCGCTTATGGGTCC 124

[illegible]

Dc
Db

183 TCAATTCTCTTGATGACAGCGCAGAACAATTGGCCGTGTCGCCGTGANGTTCCTCTGTG 242
|||||
845 tcaattctcttgatgacagcgagaacaattggccgtgtgcgccgtganagtcttcttgtg 766

Cp

243 ACCCAAGTCATTCACGAAGCAACTGCCTCCGCGGAGAAATCATCACCGCGCGCGCGCGCGA 300

CP 785 accacgactcaccagagacactcgtccgggagagagtgtgacacggatcatggggcag 726

Db 303 CCGGTATCTTGGACATCCGACGCCATCTGGTACCTGTTCAAGGCTTCTTCTGGGTG 362

Db 363 GTGCTCAGGCTGATCCACGSCAGATCAATCACAGAGGGTGATGTCTCATCTTCCGCTCC 422
|||||
665 gtgctcagggtgtccacagggcaccgatcgaatccacagagggtgatgtgcattcttcgcgctcc 606
Cp

CP	605	ccctcggccttcctcctgaatgagatattcctcttctctcca	564
DD	423	ccccccgaccttctctgcacagagatattcctcttctctcca	464
RESULT	5		

INITIATION	TS	489 bp	mRNA	EST	11-OCT-1996
zc43c09.s1 Soares senescent fibroblasts NbHSF Homo sapiens cDNA clone 325072 3' similar to gb:348568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN) ; ;	W49694				

NID	91337959	
KEYWORDS	EST.	
SOURCE	human.	
ORGANISM	Homo sapiens	
	Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata.	

REFERENCE
1 (bases 1 to 489)
vertebrata; Eutheria; Primates; Catarrhini; Homnidae; Homo.
Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
Holman, M., Hultman, M., Kucaba, T., Le, M., Lendon, G., Maria, M.,
Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,
Trevastis, F., Waterson, B. *Unpublished*

TITLE	JOURNAL	COMMENT
Wilson, R. The Washu-Merck EST Project Unpublished (1995)		Contact: Wilson RK

Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800

Fax: 314 286 1810
 Email: est@watson.wustl.edu
 This clone is available royalty-free through LLNT ; contact the
 IMAGE Consortium (info@image.llnl.gov) for further information.
 Insert Length: 615 Std Error: 0.00
 Seq primer: mob.REGA+ET
 High quality sequence stop: 387.
 Location/Qualifiers

FEATURES	Location/Qualifiers
source	1. .489

[illegible]

mRNA	/clone_1lb="Soares senescent fibroblasts NBHSP"
BASE COUNT	/tissue_type="senescent fibroblast"
ORIGIN	/lab_host="DHI0B (ampicillin resistant)"
	complement<1.>.489)
	81 a 127 c 145 g 132 t 4 others

Query Match	42.4%;	Score 438;	DB 16;	Length 489;
Best Local Similarity	98.7%;	Pred. No. 0.00e+00;		
Matches 463;	Conservative 0;	Mismatches 2;	Indels 4;	Gaps

Db 21 GGATATAGTGTTTTATATATATCCCTCTTTCACAGGAAGGATGTCAAGCTGGACCAATTCGA 80
|||||
Cp 1025 ggaatgaggtttatttcat -gcgtttcccgaaaggaatgtcagagctgtagccagtcga 967
Db 81 AACCTTGGAGGCGTTTTTTTGTACATGTGGCCACAGGCGCTGTGAGAGCCCTGCTTATGGGTC 140
|||||

CP 966 aacccttgaagctcttcttcttgagttgagccacagagggcggttgagagcctgtattggttc 907

Db 141 CTCGATGTCGAGAACTCTCTGCTTTGGGGGGCGCCGCGC -GCGTACACAGCAGCAGAGC 199

CP 906 ctctgaagtctgaagaactcctgctt -gagagagcgcgcgcgcctgattacacgcaaaaagac 848

[illegible]

Cp 787 tgaccacgacccatccagcagcactgctccggggagatgtagcaaggatcatgtgggc 728
 |||
 Db 320 AGCGGCTGATCTTGCACTCCAGCCCATCTGACCTGTTGTTCAAGCTCTTCTGTGG 379
 |||
 737 |||

Db 380 GAGGATGCTACAGGATGTCCTCCAGGACGATGATGATCAAGAGGGGATGTCATCTTGGCCG 439
|||||
Cp 668 GTGGTGTCCAGGTGTCTCCAGGTGACCGATGGAATTCACAGAGGTGTGATGTCTGATCTCTGCG 609

608	tcccccctgcgcttctcctgcacatgatattcctcttcctcccaagct	560
Cp		
440	ttccccctggccctttcccgcatgacgaataatctcttcttccccaagt	488
D0		
RESULT	6	

LOCUS	W49722	489 bp	mRNA	EST	11-OCT-1996
DEFINITION	z4c3g09.s1 Soares senescent fibroblasts Nb5Hf Homo sapiens cDNA clone 325120 3' similar to gb:s48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN).;.				
CONNECTION	124220				

NID 91337987

KEYWORDS	EST.
SOURCE	human.
ORGANISM	Homo sapiens
REFERENCE	Eukaryotae: mitochondrial eukaryotes; Metazoa: Chordata; Vertebrata: Eutheria; Primates: Catarrhini; Hominiidae: Homo. 1 (bases 1 to 489)
AUTHORS	Hallier, L., Clark, N., Dubuque, T., Elliston, R., Hawkins, M., Holman, M., Holtman, M., Kueba, T., Le, M., Lennon, G., Merrit, M., Parsons, J., Rifkin, D., Rohlfing, T., Soares, M., Tan, F., Tveavakis, E., Waterston, R., Williamson, A., Wohlmann, P. and Wilson, R.
TITLE	The Mashu-Merck EST Project
JOURNAL	Unpublished (1995)
COMMENT	Contact: Wilson RK Mashu-Merck EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu This clone is available royalty-free through LNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert length: 627 Std Error: 0.00 Seq primer: mob.REGA+ET High quality sequence stop: 336. Location/Qualifiers 1. 489 /organism="Homo sapiens" /note="Vector: pRTT3D (Pharmacia) with a modified polylinker V-TPPE: phagemid; Site.1: Not I; Site.2: Eco RI; TGTTACCAATCTGAAGTGGAGGCGGCGCCATATTTTATTTTATTTT 3'1, double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pRTT3D vector (Pharmacia). Library went through one round of normalization to a COT = 5. Library constructed by Bento Soares and M.Patima Bonaldo." /db_xref="taxon:9606" /clone="325120" /clone.lib="Soares senescent fibroblasts NBHSF" /tissue_type="senescent fibroblast" /lab_host="DH10B (ampicillin resistant)" complement(1..489) BASE COUNT 82 a 126 c 148 g 131 t 2 others
FEATURES	source
Db	21 GGGAGAGAGTGTATTTATTCATGCTGCTTCAGAGAAAGAGATGACAGCTGGACCGACGA 80
Cp	1025 gggagagaggttctatctatcgtctgcttcaggaagagatgtagagctgtagccagtcgaa 966
Db	81 ACCCTTGAAGAGCTTTTATTTTTCAGATTGGCCACAGAGGCGCTTGAGAGCGCTTATGGTCC 140
Cp	965 acccttgtaggtcttttttttgcagtttgccacagggcgcttgtagagctgtttatgggtcc 906
Db	141 TCGATGTCGAGAACTCTGCTTTGGGGGGCGCCGCGC -CGGTNACCACGACAGAGAGCC 199
Cp	905 tctgagtcgagaaactctctgctt-999999gcgcgccgcggtacacagcacagagacc 847
Db	200 GTCACTTCTCTTGATGACGAGCGAAGAACTTGGCTGTGCTGCCCTTATATTTCTTCTGT 259
Cp	846 gtcaacttctcttgaatgacagcgaaagacttgccttgctggtccgttgaatgtcttctctgt 787
Db	260 GACCCAGTCCATTCACAGAGCAGCTCGCCGGGGAGGAGATATACAGGGATCATGGGCA 319
Cp	786 gacccagtcacacacagagcacctcgccgagggagagatgtagacacagggacacatgggca 727
Db	320 GGGCGATCTTGCACTCCAGCCCATCTGTTACCTGTTGAGCTCTTCTTCGGGG 379

Cp	726	gcggtgatcttgcaactgcagccacatcgttgaacctggtgattcaggctcttcctgg- 668
Db	380	TGCTGTCAAGGGTGTCCACAGGCACAGATGAAGTCACAGAGGGTGATGTGCAATCTTGCCGT 439
Cp	667	tgtgtctaagggtgtccccaggcacagtacaagtagaggtgatgtgcatcttcgcgt 608
Db	440	CCCCCTGGGGCCTTCTCGAATGAGATAATCATCTTTCTCTCCAAAGT 488
Cp	607	cacctcg- ccttcctgcgaatgagaatactcctcttcctccaagc 560
RESULT LOCUS	7 AAA00168	583 bp mRNA EST 09-NOV-1997
DEFINITION	z69f08.r1 Soares testis NMT Homo sapiens CDNA clone 743271 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN)..	
ACCESSION	AAA00168	
KEYWORDS	g2054120	
SOURCE	EST.	
ORGANISM	human.	
REFERENCE	Homo sapiens Eukaryote; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo. 1 (bases 1 to 583)	
AUTHORS	Hallier,D., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Scheinberg,K., Stepien,M., Tan,F., Thelning,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. WashU-NCI human EST Project Unpublished (1997)	
TITLE	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: estewatson.wustl.edu This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (infoimage.llnl.gov) for further information. Insert Length: 869 Std Error: 0.00 Seq primer: -28ml3 rev2 ET from Amersham High quality sequence stop: 493. Location/Qualifiers	
JOURNAL COMMENT	FEATURES source	
FEATURES	1..583 /organism="Homo sapiens" /note="vector: pRT7D-Pac (Pharmacia). with a modified polylinker: Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(dT) primer [5', TCTTACCACACTGAGTGGAGGAGCGGCCGCCAACATTCTTTTTTTTTTTT 3']. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pRT73 vector. Library went through one round of normalization to Cots, and was constructed by Bento Soares and M. Fatima Bonaldo." /db_xref="Gene:5930425" /db_xref="Gene:5930425" /db_xref="Gene:5930425" /clone_id="Soares testis NMT" /sex="male" /lab_host="DH10B"	
BASE COUNT	147 a	151 c 163 g 122 t
ORIGIN		
Query Match	41.1%;	Score 425; DB 28; Length 583;
Best Local Similarity	100.0%;	Pred. No. 0.00e+00;
Matches	425; Conservative	0; Mismatches 0; Indels 0; Gaps 0;
Dd	159	TCATCAGGCCCACAACGGTCACTGATGAGAAGAGTGGACTCTTGAAAGACATTATAGCA 218
Y	383	tatcaagggccaaacggctcagttgaaaggaagtgtgactctgaaacgacattatgca 442

Db 219 ACCCTATCAAGAGATCCAGTATGAGATCAAGCATTAAGATGTTCAAAAGGCGCTGAGA 278
 |||||||
 Qy 443 accctatcaagagatccagtatgatacaagcataaagtgttcaaaagggcctgaga 502
 |||||||
 Db 279 AAGATATAGAGTTATCTACAGCGGCCCTCCCTCGGCACTGTGTGGGCTCGCTGGANG 338
 |||||||
 Qy 503 aggataaagatttactctacacgccccctccctcgagctgtgtg99gtctcctcgagc 562
 |||||||
 Db 339 TGGAGAAAGAGATATCTCATTCAGCAAGAGCCGAGGGGAGCGAGCAAGATGACCA 398
 |||||||
 Qy 563 ttggaagaagaagagatatctcatcttcagaaagcgagggagagcaagatgacaca 622
 |||||||
 Db 399 TCACCTCTGTGACTTCATCGTGCCTGGGACACCTTGACACCAACCAAGAAAGAGCC 458
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 Qy 623 tcaacctgtgacttcatctgtccttggacacctgacaccaccagaagaagagcc 682
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 Db 459 TGAACACAGAGTACAGATGGGCTGGAGTGAAGTACACCGGCTGCCCAAGATCCGCT 518
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 Qy 683 tgaacacagagtaaccagatgggtcgagtgcaagatcacgctgcgccccatgattccgt 742
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 Db 519 GCTACATCTCTCCCGGAGAGTGCCTGTGATGGAGTGGGTCAAGAGAAACATCA 578
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 Qy 743 gctaatctctcccccgcagagtgctctgtgactggttcacagagaagaacatca 802
 |||||||
 Db 579 ACGCG 583
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 Qy 803 acggg 807
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 RESULT LOCUS 8 T48826 434 bp mRNA EST 08-FEB-1995
 DEFINITION yb05d08.r1 Homo sapiens cDNA clone 70287 5', similar to gb:S48568
 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION T48826
 NID g650686
 KEYWORDS EST.
 SOURCE human clone-70287 library-Stratagene placenta (#937225)
 vector-pBluescript SK- host-SOLR cells (kanamycin resistant)
 primer-M13Rpl RsaI-EcoRI RsaI-EcoRI Placental tissue from a
 Caucasian male. Cloned unidirectionally. Primer: Oligo dT. Average
 insert size: 1.2 kb; Uni-ZAP XR Vector; 5' adaptor sequence:
 5'-GAATTCGGCGAG-3'; 3' adaptor sequence:
 5'-CTCGAGTTTCTTTTCTTTTCTTTT-3'.
 ORGANISM Homo sapiens
 Eucaryotes; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalia;
 Eutheria; Primates; Catarrhini; Homnidae; Homo.
 REFERENCE 1 (bases 1 to 434)
 AUTHORS Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
 Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
 Parsons, J., Rifkin, L., Rohlfing, T., Tan, F., Treviskis, E.,
 Waterston, R., Williamson, A., Wohlmann, P. and Wilson, R.
 WASHU-MERCK EST Project
 Unpublished (1995).
 OTHER ESTs: yb05d08.s1
 CONTACT: Wilson RK
 WASHU-MERCK EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.wustl.edu
 High quality sequence stops: 391
 Source: IMAGE Consortium, LNLN.
 This clone is available royalty-free through LNLN; contact the
 IMAGE Consortium (info@image.lnl.gov) for further information.
 FEATURES
 SOURCE 1...434
 /organism="Homo sapiens"
 /clone="70287"
 BASE COUNT 111 a 109 c 125 g 86 t 3 others
 ORIGIN

Query Match 37.3%; Score 385; DB 10; Length 434;
 Best Local Similarity 97.4%; Pred. No. 0.00e+00;
 Matches 418; Conservative 0; Mismatches 6; Indels 5; Gaps 5;
 Db 7 TGGACACCTATCAAGAGATCCAGTATGAGATCAAGCATTAAGATGTTCAAAAGGC 66
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 Qy 438 tggcaacctatcaagaagatccag-tatgagataagcagataaagatgttcaaaagggc 496
 |||||||
 Db 67 CTGAAAGGATATAGATTATCTACAGCGGCCCTCCCTCGGCACTGTGTGGGCTCGC 126
 |||||||
 Qy 497 ctgaaagatatagatttactacacgccccctccctcgagctgtgtg99gtctcgc 556
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 Db 127 TGGAGTTGAGAGAAAGAGATATCTCATTCAGCAAGAGCCGAGGGGAGCGGCAAGA 186
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 Qy 557 tggagttggagaaagaagagatatctcatcttcagaaagcgagggagagcaaga 616
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 Db 187 TGCACATACCCCTGTGACTTCATCGTGCCTGGGACACCTTGACACCAACCAAGAGA 246
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 Qy 617 tgcacataccctctgtgacttcatctgtcccttggacacctgagcaccaccagaaga 676
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 Db 247 AGAGCTGAACACAGATACAGATGGGCTGGAGTGAAGTACACGGCTGCCCATCA 306
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 Qy 677 agagcttgaacacacagatcacagatgggtcgagtgcaagatcacgctgcctccatga 736
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 Db 307 TCCGCTGCTACATCTCCCGGAGAGTGCCTGTGATGGATGGGTCAAGAGAAG 366
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 Qy 737 tccggtgt-aaatctctctcccgagagtgctctgtgactggtgttcacagaaga 795
 |||||||
 Db 367 AACATCAACGGGACACAGGACGATTTTTCGCTTGNATCAAGAGA-GTACGGCTTCT 425
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 Qy 796 aacatcaacgggacacagagccaagtctt-cgctt-gatcaagaagatgagcgctcct 853
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 Db 426 GTGGCTTCT 434
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 Qy 854 gtgcgtgt 862
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 RESULT LOCUS 9 W49721 532 bp mRNA EST 11-OCT-1996
 DEFINITION zc43g09.r1 Soares senescent fibroblasts NBHSF Homo sapiens cDNA
 clone 325120 5' similar to gb:S48568 TISSUE INHIBITOR OF
 METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION W49721
 NID g1337986
 KEYWORDS EST.
 SOURCE human.
 ORGANISM Homo sapiens
 Eukaryotes; mitochondria eukaryotes; Metazoa; Chordata;
 Vertebrata; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 REFERENCE 1 (bases 1 to 532)
 AUTHORS Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
 Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
 Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, F.,
 Treviskis, E., Waterston, R., Williamson, A., Wohlmann, P. and
 Wilson, R.
 WASHU-MERCK EST Project
 Unpublished (1995)
 CONTACT: Wilson RK
 WASHU-MERCK EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.wustl.edu
 This clone is available royalty-free through LNLN; contact the
 IMAGE Consortium (info@image.lnl.gov) for further information.
 Insert Length: 627 Std Error: 0.00
 Seq primer: MOD.RS6A+ET
 High quality sequence stop: 347.
 Location/Qualifiers

FEATURES

NID	KEYWORDS	SOURCE	ORGANISM	REFERENCE	AUTHORS	TITLE	JOURNAL	COMMENT
91767539	EST	house mouse.	Mus musculus	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.				
1 (bases 1 to 531)								
Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theisinger, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and Waterston, R.								
The WashU-HMI Mouse EST Project								
Unpublished (1996)								
Contact: Marra M/Mouse EST Project								
WashU-HMI Mouse EST Project								
Washington University School of Medicine								
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108								
Tel.: 314 286 1800								
Fax: 314 286 1810								
Email: mouseest@wustl.edu								
This clone is available royalty-free through LNL; contact the IMAGE Consortium (info@image.lnl.gov) for further information.								
NCI:342260								
Seq primer: -28ml3 rev1 ET from Amersham								
High quality sequence stop: 96.								
Location/Qualifiers								
1. 531								
/organism="Mus musculus"								
/strain="Inbred CD-1"								
/note="Vector: pBluescript SK-; Site:1: EcoRI; Site:2: XhoI; Cloned unidirectionally. Primer: Oligo dT. Average insert size: 1.0 kb; Uni-ZAP XR Vector; ~5' adaptor sequence: 5' GAATTCGGCAGCAG 3' ~3' adaptor sequence: 5' CTCGAGTTTTTTTTTTTTTTT 3' "								
/db_xref="taxon:10090"								
/clone="567612"								
/clone_id="Stratagene mouse testis (#937308)"								
/sex="males"								
/dev_stage="10-12 week old"								
/lab_host="SOLR (kanamycin resistant)"								
<1. >531								
BASE COUNT	135 a	138 c	148 g	110 t				
ORIGIN								
mRNA								
ery Match	35.3%	Score 365:	DB 18:	Length 531:				
st Local Similarity 88.4%;								
atches 443; Conservative 0;								
Mismatches 54; Indels 4;								
Gaps 4;								
4 GCCTGCGC-TCTGCTCTAGCTCTGCTGCTGC-CGGCGGAGCGCTGACGTCTCC 61								
283 ggcctgcgcctcctgcctgcctgcctgcctgcctgcctgcctgcctgcctgcctgcctc 342								
62 CCGGTGCACCCGCAACAGCGCGTTTGCATGACGAGCTGATGATGAGACCAAGCATG 121								
343 ccggtgcacccgcaacagcgcttgcctgcaatgcaatgcatgcatgcaagcgatcag 402								
122 AGCGAAGAGGAGGAGTCCGTGAATGACATCTTGGCAACCCATGCAAGAGATTGAG 181								
403 agtgcagaaggaagtgagatctcgaaacacatctatgcaaccatcaagaagatccag 462								
182 TATGATCAAGCATATTAAGATGTTCAAGAGACCTGCAAAAGACATCGAGTTATCTAC 241								
463 tatgagatcaagcgatataagatgttcaagaagcctcgtaagaagatataagattctcac 522								
242 ACGGCCCCCTTTACACAGTGTGCGGGGTCTCGCTGACGTTGGAGGAAGAAGATAT 301								
523 aacgccccctcctcctgcagtggtgtgtgggtctcgcgcgcgcgttgcgaagaagaat 582								
302 CTAATTGAGGAAGGCGAAGAGAGATGCAAGATGACATTAACCTCTGTGATCTTCAT 361								

OY	583	cctattgcaggagaagccgagggcggaacgatgcatacaccctctgtgaattcatc	642
Db	362	GTGCCCCGGAGAACCGCTTAGCCTACCCAGAAGAGATCTGCAGCCACAGTACCAGATT	421
OY	643	gtgcctatggaaacaccttgagcacaccacaagaagagcctctaaccaagttacacagt	702
Db	422	GCGTCMGAGTGCAAAATAACTACGCTGTGGCATGATGACTTGGTATACATCTMTGCC	480
OY	703	ggctgcgagtgtaagaatcaacgcgcgcgcccatgataccgctgatactctcccgcgac	762
Db	481	GAGTGCCTTC-GGATGAGACTGC	500
OY	763	gagtcgctctgtgatgactg	783
RESULT LOCUS	12 M85579	394 bp mRNA	EST 26-MAY-1992
DEFINITION	ESR02095 Homo sapiens CDNA clone HFBCK3 similar to Metalloproteinase Inhibitor.		
ACCESSION	M85579		
NID	9274226		
KEYWORDS	EST.		
SOURCE	human clone-HFBCK35 library-Petal brain, Striatum (Cat#936206) vector-lambdaZAP-II primer-M13 Forward 17-18 wk gestation, female; oligo-dT + random primed CDNA synthesis; lambdaZAP-II vector, 1.0kb average insert size.		
ORGANISM	Homo sapiens		
REFERENCE	Eukaryotes; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Carnivora; Homnidae; Homo. I (bases 1 to 394)		
AUTHORS	Adams,M.D., Dubnick,M., Kervilave,A.R., Moreno,R., Kelley,J.M., Teucherack,T.R., Nagle,J.W., Fields,C. and Venter J.C.		
TITLE	Sequence identification of 2,375 human brain genes		
JOURNAL	Nature 355 (6361), 632-634 (1992)		
MEDLINE	92168112		
COMMENT	Contact: Kerlavage AR The Institute for Genomic Research 932 Clopper Road, Gaithersburg, MD 20878 Tel: 3018699056 Fax: 3018699423 Email: arkerlav@tigr.org. Location/Qualifiers 1..394 /organism="Homo sapiens" /clonetype="HFBCK35"		
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Best Local Similarity	97.7%; Pred. No. 0.00e+00;		
Matches	386; Conservative 0; Mismatches 5; Indels 4; Gaps 4;		
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OY	616	atgcataccaccctctgtgaattcatctgctgccttgagacaccttgagacaccacagag	675
Db	61	AAGACCCGAACCAAGGTACCAATGAGGCGTGCAGAGTCAAGATCAGCGCTGCCCATG	120
OY	676	aagacccggaaccaaaggtaccagagttggtcgcagatgcaagatacgcgtctgccatg	735
Db	121	ATTCGCTCTCATCTCTCTCCCGGACAGTGCCTCTGATGAGTGGGTACAGAGAG	180
OY	736	atcccgctcatactctctcccggaagagtgctcttgatgagctggttcaacagaag	795
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 Oy 974 gtccagctctgaacatccctcttcg-aaacagcat 1007

[illegible]

Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
Email: Robert_Strausberg@nih.gov
Tissue Procurement: Ilan Kirsch, M.D., Michael R. Emmert-Buck, M.D., Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CCAP clone distribution information can be found through the I.M.A.G.E.E. Consortium/ULML at: www-bio.lnl.gov/bbrp/Image/Image.html

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Trace considered overall poor quality
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High quality sequence stop: 1.
      Location/Qualifiers
source          1. .386
FEATURES

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oligo(dT) primer. Double-stranded cDNA was ligated to Eco
RI adaptors (Pharmacia), digested with Not I and cloned
into the Not I and Eco RI sites of the modified pT73
vector. Library is normalized. Library was constructed by
Bento Soares and M. Fatima Bonaldo (N-Soares4)."
/db_xref="taxon:9606"
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/lab_host="DH10B"

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Cp	965	aaccttgaagagcttttttttgcagtcttgccacaaagggcgttgagaagccctcttatgtgtcc	906
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Db	313	C-CGAGATCTTGCAATCGAGGCCATCTGATACCTGTGGGTACAGGCTTCTTCTGGGTTG	371
Cp	725	cgcgctgatatctgcactgcagaccccaactctgtacctgtgttcaagctctctctctcgtgtg	666
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Cp	665	gtgtccatcaggtgtcc	651

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DEFINITION		vfg1a09_r1 Soares mouse mammary gland NBMG Mus musculus cDNA clone 851128.5 similar to gb: X62622 M.musculus TIMP-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE) .			
ACCESSION		AA462734			
NTID		92187625			
KEYWORDS		EST.			
SOURCE		house mouse.			
ORGANISM		Mus musculus			
		Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
REFERENCE		1 (bases 1 to 429)			
AUTHORS		Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisler, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Thelsting, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and Waterston, R.H.			
TITLE		The WashU-BHMI Mouse EST Project			
JOURNAL		Unpublished (1996)			
COMMENT					

TITLE
 The WashU-HHMI Mouse EST Project
 JOURNAL
 Unpublished (1996)
 COMMENT
 Contact: Marra M/Mouse EST Project
 WashU-HHMI Mouse EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel.: 314 286 1800
 Fax: 314 286 1810
 Email: mouseest@watson.wustl.edu
 This clone is available royalty-free through LINL ; contact the
 IMAGE Consortium (info@image.llnl.gov) for further information.
 MGI:503280
 Seq primer: -28m13 rev2 ET from Amersham
 High quality sequence stop: 369.
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 FEATURES
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TGTTCACCATGTCAGAGGAGCGCGCCGACAAAGGTTTTTTTTTTTTTTT
T 3']; double-stranded cDNA was ligated to Eco RI

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Search completed: Mon May 4 14:42:31 1998
Job time : 1732 secs.



Release 3.0.5AA John F. Collins, Bioinformatics Research Unit.
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MPearch.pp protein - protein database search, using Smith-Waterman algorithm

Mon May 4 14:49:00 1998; MasPar time 9.43 Seconds

ular output not generated. 348.668 Million cell updates/sec

Title: >R07954
Description: (1-220) from a-geneseq.pep
Perfect Score: 1651
Sequence: 1 mgaarsipiafcilllgtl.....cwygaapqkqefidiedp 220

Scoring table:
Gap 11
PAM 150

Searched: 120837 seqs, 14945562 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database:

a-geneseq31
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26

Statistics: Mean 31.999; Variance 118.552; scale 0.270

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	1651	100.0	220	12	R62768 Bovine metalloprotein	3.28e-173
2	1651	100.0	220	2	R07954 Bovine metalloprotein	3.28e-173
3	1550	93.9	220	12	R62769 Human metalloprotein	1.40e-161
4	1550	93.9	220	13	R65009 Human tissue inhibitor	1.40e-161
5	1550	93.9	220	2	R07955 Human metalloprotein	1.40e-161
6	1416	85.8	194	2	R06896 Complete sequence of	3.58e-146
7	1365	82.7	186	2	R06896 Part of TIMP-2 metallo	2.58e-140
8	1339	81.1	192	2	R06896 Metalloproteinase inh	2.49e-137
9	1301	78.8	177	2	R06897 Part of TIMP-2 metallo	5.69e-133
10	817	49.5	224	23	R25603 TIMP-3 inhibitor of m	8.97e-78
11	815	49.4	224	18	R98265 Tissue inhibitor of m	8.97e-77
12	702	42.5	211	25	R30310 Human TIMP-1/TIMP-3 f	8.56e-65
13	681	41.2	198	15	R84216 TIMP-3 clone-2 produc	1.97e-62
14	681	41.2	206	13	R65014 Human tissue inhibitor	1.97e-62
15	681	41.2	211	15	R84215 TIMP-3 clone-7 produc	1.97e-62
16	681	41.2	211	13	R72598 TIMP-3 metalloprotein	1.97e-62
17	680	40.5	212	13	R65002 Chicken tissue inhibi	2.35e-62
18	668	40.5	188	25	R30308 Human TIMP-3	5.68e-61
19	669	40.5	211	13	R65001 Mouse tissue inhibitor	4.39e-61

20	631	38.2	184	13	R65000 Chicken inhibitor of	8.01e-57
21	543	32.9	164	15	R84217 TIMP-3 HCM-3 clone pr	5.30e-47
22	513	31.1	206	13	R65006 Rabbit tissue inhibit	1.13e-43
23	512	31.0	207	13	R65003 Cattle tissue inhibit	1.46e-43
24	511	31.0	207	3	R60592 Sequence of a human p	1.89e-43
25	511	31.0	207	25	R30309 Human TIMP-1	1.89e-43
26	511	31.0	207	3	R60786 Sequence of tissue in	1.89e-43
27	511	31.0	207	3	R60775 Sequence of human nat	1.89e-43
28	510	30.9	205	13	R65007 Mouse tissue inhibit	2.43e-43
29	506	30.6	207	3	R60593 Sequence of a gibbon	6.75e-43
30	493	29.9	207	13	R65005 Human tissue inhibit	1.85e-41
31	475	28.8	207	13	R65004 Pig tissue inhibitor	1.80e-39
32	463	28.0	207	13	R65008 Mouse tissue inhibit	3.78e-38
33	369	18.7	48	2	R06749 Peptide #1 for detect	2.01e-21
34	219	13.3	28	9	R47010 Metalloproteinase inh	5.35e-12
35	167	10.1	24	2	R06894 Peptide #3 for detect	8.79e-07
36	157	9.5	19	9	R47011 Metalloproteinase inh	8.26e-06
37	149	9.0	47	3	R60276 N-terminal sequence o	4.85e-05
38	144	8.7	22	2	R10001 Immunogenic TIMP-2 pe	1.45e-04
39	140	8.5	18	2	R06747 Tryptic digestion pro	3.47e-04
40	134	8.1	18	2	R10002 Tissue inhibitor of m	1.27e-03
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42	130	7.9	16	2	R06748 Tryptic digestion pro	4.57e-03
43	128	7.8	15	2	R10003 Peptide #2 for detect	4.57e-03
44	128	7.8	23	2	R06750 N-terminal of monocy	3.03e-02
45	119	7.2	20	6	R31183	

ALIGNMENTS

RESULT 1	R62768 standard; Protein; 220 AA.
ID	R62768;
AC	13-JUL-1995 (first entry)
DE	Bovine metalloproteinase inhibitor
KM	Metalloproteinase inhibitor; tumour cell dissemination;
KW	rheumatoid arthritis; dystrophic epidermolysis bullosa;
OS	emphysema; osteoporosis; MI gene disorders.
FS	Bos taurus.
FT	Key
FT	peptide
PN	EP-623676-A.
PD	09-NOV-1994.
PE	18-MAY-1990; 305433.
PR	19-MAY-1989; US-355027.
PR	29-MAR-1990; US-501904.
PA	(AMGE-) AMGEN INC.
PI	(CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI	Boone TC, Declerck VA, Langley KE;
DR	WPI: 94-34309/43.
DR	N-PSDB: 073087.
PT	New metalloproteinase inhibitor, analogues and DNA - for
PT	treating tumour cell dissemination, rheumatoid arthritis and for
PT	large-scale recombinant inhibitor prodn.
PS	Claim 12; Fig 1; 65pp; English.
CC	G73087 encodes R62768 bovine metalloproteinase inhibitor (MI), it
CC	may be used to inhibit tumour cell dissemination and for treating
CC	rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
CC	and osteoporosis. The DNA may be used to detect MI gene disorders.
SO	Sequence 220 AA;

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Best Local Similarity 100.0%; Pred. No. 3.28e-173;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 2
 ID R07954 standard; protein; 220 AA.
 AC R07954;
 DT 21-FEB-1991 (first entry)
 DE Bovine metalloproteinase inhibitor gene product.
 KM Tumour, chemotherapy; cancer; Paget's disease; osteoporosis;
 KW scleroderma; cholesteatoma.
 OS Bos taurus.
 FH Key
 Location/Qualifiers
 protein 27..220
 EP-398753-A.
 PF 22-NOV-1990.
 PR 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PA (CHIL-) CHILDREN'S HOSPITAL OF LA.
 PI Langley KE, Boone TC, Declerck YA;
 DR 90-350481/47.
 DR N-PSDB; Q06583.
 PT New metallo-proteinase inhibitor polypeptide(s) - and DNA
 encoding them, for treatment of tumour cell dissemination and
 rheumatoid arthritis
 PT rheumatoid arthritis
 PS claim 12; fig 1; 63pp; English.

CC The product has therapeutic use in inhibiting tumour dissemination
 during chemotherapy and radiation therapy, impurged bone marrow cell
 harvesting etc. The inhibitor may also be useful in encapsulating
 CC tumours aiding clean excision, and in treatment of emphysema, Paget's
 CC disease, osteoporosis, scleroderma and bedsores.
 CC The gene product also has application in autoimmune disorders eg.
 CC rheumatoid arthritis and multiple sclerosis.
 CC See also Q06584.
 CC Sequence 220 AA;

Query Match 100.0%; Score 1651; DB 2; Length 220;
 Best Local Similarity 100.0%; Pred. No. 3.28e-173;
 Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 3
 ID R62769 standard; protein; 220 AA.
 AC R62769;
 DT 13-JUL-1995 (first entry)
 DE Human metalloproteinase inhibitor.
 KM Metalloproteinase inhibitor; tumour cell dissemination;
 KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
 KW emphysema; osteoporosis; MI gene disorders.

OS Homo sapiens.
 FH Key
 Location/Qualifiers
 FT peptide 1..26
 FT /label= sig_peptide
 EP-623676-A.
 PD 09-NOV-1994.
 PF 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PA (CHIL-) CHILDREN'S HOSPITAL LOS ANGELES.
 PI Boone TC, Declerck YA, Langley KE;
 DR WPI; 94-343309/43.
 DR N-PSDB; Q73088.
 PT New metallo:proteinase inhibitor, analogues and DNA - for
 treating tumour cell dissemination, rheumatoid arthritis and for
 PT large-scale recombinant inhibitor prodn.
 PS claim 8; fig 2; 65pp; English.
 CC Q73088 encodes R62769 human metalloproteinase inhibitor (MI). It
 CC may be used to inhibit tumour cell dissemination and for treating
 CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
 CC and osteoporosis. The DNA may be used to detect MI gene disorders.
 CC Sequence 220 AA.

Query Match 93.9%; Score 1550; DB 12; Length 220;
 Best Local Similarity 91.8%; Pred. No. 1.40e-161;
 Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

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 Db 61 iygnpkrlryqelkqikmkgpdpqdefiyltapaaavcgsldigqkkeyllagkaeag 120
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RESULT 4
 ID R65009 standard; protein; 220 AA.
 AC R65009;
 DT 24-OCT-1995 (first entry)
 DE Human tissue inhibitor of metalloproteinase (TIMP-2).
 KM Tissue inhibitor of metalloproteinase; diagnostic; therapeutic;
 KW prophylaxis.
 OS Homo sapiens.
 PN M09505478-A.
 PD 23-FEB-1995.
 PF 12-AUG-1994; U09188.
 PR 13-DEC-1993; US-105263.
 PR 13-DEC-1993; US-167463.
 PA (REGC) UNIV CALIFORNIA.
 PI Hawkes SP, Kishnani NS, Yang T;
 DR WPI; 95-098775/13.
 PT New human tissue inhibitor of metallo:proteinase-3 - used to
 develop prods. for diagnosis, therapy or prophylaxis of
 PT conditions with unwanted matrix metallo:proteinase activity.
 PS disclosure; fig 6A-B; 87pp; English.
 CC The protein sequence of human TIMP-2 is compared with the cattle,
 CC pig, human, rabbit and mouse TIMP-1, mouse and cattle TIMP-2, and
 CC chicken (Ch) and mouse TIMP-3. A probe based on the CHIMP-3
 CC amino acid sequence (R65000) is used to isolate DNA encoding
 CC human TIMP-3 from a human cDNA library. Human TIMP-3 can be used
 CC for the diagnosis, therapy or prophylaxis of conditions
 CC characterized by excess or unwanted matrix metalloproteinase
 CC activity, e.g. neoplasias, tumor metastasis, inflammatory

CC disorders such as rheumatoid arthritis, ulcerations, reaction
CC to infection, periodontal disease or osteoporosis. It can also
CC be used in drug screening/design.
SQ Sequence 220 AA;

Query Match 93.9%; Score 1550; DB 13; Length 220;
Best Local Similarity 91.8%; Pred. No. 1.40e-161;
Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

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RESULT 5
ID R07955 standard; protein; 220 AA.
AC R07955;
DT 21-FEB-1991 (first entry)
DE Human metalloproteinase inhibitor gene product.
KW Tumour; Chemotherapy; cancer; Paget's disease; osteoporosis;
KW scleroderma; cholesteatoma.
OS Homo sapiens.
FH Key Location/Qualifiers
FT protein
PN EP-398753-A.
PD 22-NOV-1990.
PE 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PA (CHIL-) CHILDREN'S HOSPITAL OF LA.
PI Langley KE, Boone TC, Declerck YA;
DR N-PSDB; Q06584.
PT New metallo-proteinase inhibitor polypeptide(s) - and DNA
PT encoding them, for treatment of tumour cell dissemination and
PT rheumatoid arthritis
CC Claim 12; Fig 2; 63pp; English.
CC The product has therapeutic use in inhibiting tumour dissemination
CC during chemotherapy and radiation therapy, impurged bone marrow cell
CC harvesting etc. The inhibitor may also be useful in encapsulating
CC tumours aiding clean excision, and in treatment of emphysema, Paget's
CC disease, osteoporosis, scleroderma and bedsores.
CC The gene product also has application in autoimmune disorders eg.
CC Rheumatoid arthritis and multiple sclerosis.
CC See also Q06583.
SQ Sequence 220 AA;

Query Match 93.9%; Score 1550; DB 2; Length 220;
Best Local Similarity 91.8%; Pred. No. 1.40e-161;
Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

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Oy 121 nmhltlclfdlvpwclstqtqkslnhrygmgeckltircpmipcyisspdeclwmdwvte 180
Db 181 knlmgqakffacikrdsdscawrygaapkpqefldiedp 220
Oy 181 knlmgqakffacikrdsdscawrygaapkpqefldiedp 220

RESULT 6
ID R06898 standard; protein; 194 AA.
AC R06898;
DT 16-JAN-1991 (first entry)
DE Complete sequence of human TIMP-2 from Clone PSS38.
KW matrix metalloproteinase inhibitor; TIMP-2; PSS38.
OS Synthetic.
PN US7494796-A.
PD 21-AUG-1990.
PE 13-MAR-1990; 494796.
PR 21-MAR-1989; US-326334.
PR 17-JUL-1989; US-380431.
PR 18-AUG-1989; US-395453.
PR 13-MAR-1990; US-494796.
PA (USSH) NAT INST OF HEALTH.
PI Stetler-Sevenson WC, Liotta LA, Kruetzsch HC;
DR WPI: 90-290097/38.
DR N-PSDB; Q05940.
PT New matrix metallo-proteinase inhibitor - used to treat diseases
PT resulting from matrix metallo-proteinase activity and in
PT diagnosis, detection and purificn.
PS Disclosure; Fig 7; 54pp; English.
CC TIMP-2 was isolated from human melanoma cell-conditioned media and
CC the amino acid sequence determined. A probe was synthesised
CC based upon the protein sequence information. It was used to screen
CC a LambdaGem-4 cDNA library prepared from human melanoma cells. 239
CC positives were identified from a total of 750,000 plaques screened.
CC Further analysis and screening with additional probes eliminated
CC most of the clones. Clone PSS38 was isolated and the nucleotide
CC sequence of the cDNA insert was determined. The deduced amino acid
CC sequence showed excellent agreement with that derived by directly
CC sequencing the TIMP-2 protein.
CC See also Q05937, R06746-R06750, R06894-R06895 and Q05938-Q05939.
SQ Sequence 194 AA;

Query Match 85.8%; Score 1416; DB 2; Length 194;
Best Local Similarity 93.8%; Pred. No. 3.58e-146;
Matches 182; Conservative 9; Mismatches 3; Indels 0; Gaps 0;

Db 1 cscspvhpqafcnadivlrakavsekevsgndlygnplkrlgylkqlkmfkyppdgd 60
Oy 27 cscspvhpqafcnadivlrakavkvevsgndlygnplkrlgylkqlkmfkyppdgd 86
Db 61 efiytapsavcgsldvggkkeyllagkaegdgkmhltlclfdlvpwclstqtqkslnh 120
Oy 87 efiytapsavcgsldvggkkeyllagkaegdgkmhltlclfdlvpwclstqtqkslnh 146
Db 121 rygmgeckltircpmipcyisspdeclwmdwvteknlmgqakffacikrdsdscawry 180
Oy 147 rygmgeckltircpmipcyisspdeclwmdwvteknlmgqakffacikrdsdscawry 206

Db 181 aapkpqefldiedp 194
Oy 207 aapkpqefldiedp 220

RESULT 7
ID R06896 standard; protein; 186 AA.
AC R06896;
DT 16-JAN-1991 (first entry)
DE Part of TIMP-2 metalloproteinase inhibitor, encoded by clone PSS15.
KW matrix metalloproteinase inhibitor; TIMP-2; PSS15.
OS Synthetic.
PN US7494796-A.
PD 21-AUG-1990.

OY 104 19gkkeylagkaegnmhltlclfdlvpwtdlsatqkkslnhrygmgecklttrcpmip 163
DB 121 cyispdclmwdvteknngqakffactkrsgscawyrgaapbkqefidiedp 177
OY 164 cyispdclmwdvteknngqakffactkrsgscawyrgaapbkqefidiedp 220

RESULT 10

ID W25603 standard; protein; 224 AA.
AC W25603;
DT 03-NOV-1997 (first entry)
DE Tissue inhibitor of metalloproteinase, TIMP-4.
KW Tissue inhibitor of metalloproteinase; TIMP-4; Inocyte Clone No. 589345;
KW metalloproteinase; tumour metastasis; angiogenesis; growth; osteoarthritis;
KW osteoporosis; pulmonary emphysema; periodontal disease; diabetic ulcer;
KW rheumatoid arthritis; contraception; gene therapy; corneal ulcer.
OS Homo sapiens.
FH Key Location/Qualifiers
FT peptide 1..29
FT protein /note- "Signal peptide"
FT /note- "Mature TIMP-4"
FT domain 47..51
FT /note- "Domain characteristic of TIMPs"

FT US5643752-A.
FN 01-JUL-1997.
PD 18-JAN-1996; 588163.
PR 18-JAN-1996; US-588163.
PA (INCYTE) INCYTE PHARM INC.
PI Hawkins PR, Murry LE;
DR WPI: 97-350238/32.
DR N-PSDB: T80986.
PT DNA encoding a tissue inhibitor of metalloproteinase(s), TIMP-4 -
PT for production of recombinant protein for treating tumours,
PT arthritis, etc., and for contraception
PS Claim 1; Fig 1; 24pp; English.
CC This sequence is a tissue inhibitor of metalloproteinases designated
CC TIMP-4. The cDNA clone was identified with Inocyte Clone No. 589345.
CC TIMP-4 can be used to treat disorders associated with excessive
CC metalloproteinase expression, e.g. tumour metastasis, angiogenesis and
CC growth, osteoarthritis, osteoporosis, pulmonary emphysema, periodontal
CC disease and rheumatoid arthritis, and for contraception. TIMP-4 cDNA
CC can be used for gene therapy of such disorders and in diagnostic assays
CC for TIMP-4 mRNA in cells and tissues. Oligonucleotide fragments of the
CC TIMP-4 cDNA and antagonists or inhibitors of TIMP-4 can be used to treat
CC disorders associated with over-expression of TIMP-4, e.g. to promote
CC healing of corneal and diabetic ulcers and ulcers/lesions caused by
CC microorganisms. Antibodies to TIMP-4 can be used to diagnose such
CC ulcers or lesions.
Sequence 224 AA;

Query Match 49.5%; Score 817; DB 23; Length 224;

Best Local Similarity 45.1%; Pred. No. 8.97e-78;

Matches 102; Conservative 59; Mismatches 57; Indels 8; Gaps 6;

DB 1 mpsgrpapr-svwlrlrllallrppglgeacscapahpqhichsalvtrkissekvvp 59
OY 1 mgsaarslplacilll-lytlll-pra--dacspsvhpqafonadivtrkavknkved 56
DB 60 asadp-adetkmlryelkqkfmkfgfekvdylytpdsslcgkklcaansqkyllyt 118
OY 57 sgndlygnpkrlyqelqkfmkfgpdq--dieflytapaavcgsvidgkkeyllag 114
DB 119 gylsdgkvfihlcnylepedslvqreslnhynhncgqiltctytpctlsapneclw 178
OY 115 kaegngnmhltclfdlvpwtdlsatqkkslnhrygmgecklttrcpmipcyisspdeclw 174
DB 179 tdwllerklylgyaqhycmkhvdgscswyrghlplrkfevdvvp 224
OY 175 mdwvteknngqakffactkrsgscawyrgaapbkqefidiedp 220

RESULT 11

ID R98265 standard; Protein; 224 AA.

AC R98265;

DT 09-OCT-1996 (first entry)

DE Tissue inhibitor of metalloproteinase-4 (TIMP-4).

KW Tissue inhibitor of metalloproteinase-4; TIMP-4; cancer; arthritis;

KW bone resorption; Paget disease; hyperparathyroidism;

KW cholesteatoma; therapy.

OS Homo sapiens.

FH Key Location/Qualifiers

FT peptide 1..29

FT /label- sig_peptide

FT protein 30..224

FT /label- Mat_protein

FN M09618725-A1.

PD 20-JUN-1996.

PR 13-DEC-1994; U14498.

PR 13-DEC-1994; WO-014498.

PA (HUMA-) HUMAN GENOME SCI INC.

PI Greene JM, Rosen CA;

DR WPI: 96-300644/30.

DR N-PSDB: T34433.

PT DNA encoding human tissue inhibitor of metalloproteinase-4 (TIMP-4)

PT - useful to treat, e.g. cancer, arthritic diseases, bone resorption

PT diseases, etc.

PS Claim 14; Fig 1; 49pp; English.

CC Human tissue inhibitor of metalloproteinase-4 (TIMP-4) (R98265)

CC is a novel member of the TIMP family. Its amino acid sequence was

CC deduced from a cDNA clone (T34433) obtd. from an early stage

CC human brain. The sequence shows 48% identity to human TIMP-2.

CC Recombinant TIMP-4 can be expressed in e.g. E. coli, COS or insect

CC cell hosts. It can be used to treat patients in need of TIMP-4

CC (e.g. cancer, arthritic diseases, bone resorption diseases, Paget's

CC disease, hyperparathyroidism and cholesteatoma), and to screen for

CC antagonists useful for treating patients in need of TIMP-4 inhibition

CC (e.g. for tissue repair and remodeling). It can also be used in

CC diagnostic processes.

CC Sequence 224 AA;

Sequence 224 AA;

Query Match 49.4%; Score 815; DB 18; Length 224;

Best Local Similarity 45.1%; Pred. No. 1.51e-77;

Matches 102; Conservative 58; Mismatches 58; Indels 8; Gaps 6;

DB 1 mpsgrpapr-svwlrlrllallrppglgeacscapahpqhichsalvtrkissekvvp 59
OY 1 mgsaarslplacilll-lytlll-pra--dacspsvhpqafonadivtrkavknkved 56
DB 60 asadp-adetkmlryelkqkfmkfgfekvdylytpdsslcgkklcaansqkyllyt 118
OY 57 sgndlygnpkrlyqelqkfmkfgpdq--dieflytapaavcgsvidgkkeyllag 114
DB 119 gylsdgkvfihlcnylepedslvqreslnhynhncgqiltctytpctlsapneclw 178
OY 115 kaegngnmhltclfdlvpwtdlsatqkkslnhrygmgecklttrcpmipcyisspdeclw 174
DB 179 tdwllerklylgyaqhycmkhvdgscswyrghlplrkfevdvvp 224
OY 175 mdwvteknngqakffactkrsgscawyrgaapbkqefidiedp 220

RESULT 12

ID W30310 standard; Protein; 211 AA.

AC W30310;

DT 29-JAN-1998 (first entry)

DE Human TIMP-1/TIMP-3 fusion protein.

KW TIMP-3; human; antibody; TIMP-3-mediated disease; malignant tumour cell;

KW cancer progression; TIMP-1.

OS Homo sapiens.

FH Key Location/Qualifiers

FT key 1..23

FT /note- "TIMP-1 fragment"

FT Misc-difference 24..211

FT /note- "TIMP-3 fragment"

FN J09235300-A.

RESULT 15

ID R84215 standard: Protein; 211 AA.

AC R84215; 29-FEB-1996 (first entry)

DT TIMP-3 clone-7 product.

DE TIMP-3: tissue inhibitor metalloproteinase type three; cancer;

KW inflammation; emphysema; embryo implant modulation; arthritis;

KW dystrophic epidermolysis bullosa; periodontal disease; ulcer;

KW scleroderma; vulnery.

OS Homo sapiens.

FH Key

FT peptide

FT modified_site

PN W09509918-A1.

PD 13-APR-1995.

PF 04-OCT-1994; U11241.

PR 06-OCT-1993; US-134231.

(AMGE-) AMGEN INC.

Koski RA, Silbiger SM;

WPI; 95-155259/20.

N-PSDB; T02359.

New tissue inhibitor metalloproteinase type three - for treating

cancer, inflammation, emphysema, embryo implant modulation, nerve

cell disorders, etc.

PS Claim 3; Page 66-67; 112pp; English.

CC The product (R84215) of Timp3clone7 cDNA clone (T02359) is a novel

tissue inhibitor metalloproteinase, designated TIMP-3. Recombinant

TIMP-3 can be expressed in prokaryotic or eukaryotic host cells

and used to treat degradative diseases of connective tissues.

CC Sequence 211 AA;

SO

Query Match 41.2%; Score 681; DB 15; Length 211;

Best Local Similarity 43.7%; Pred. No. 1,97e-62;

Matches 87; Conservative 51; Mismatches 51; Indels 10; Gaps 8;

Db 21 aeactcspshpdaefnsdivtrakvvgkklvkegp--fgt-l--v-ytlkqmkmyrgft 74

QY 24 adacscspvhpqgaafcnadivtrakvknkvdsgndlygnpikrtlyekqikmktg-p 82

Db 75 kmphqyihhtaseslglklleevn-kyqyllgrvy-dgkmtyglcnfverwdqtltsgr 132

QY 83 d-qdletfytapaavcgsldlgkkeyltagkaegnghmltldctdivpwtltsatqk 141

Db 133 kglmyrhlgccklkscyyllpcftskneclwtmnltnfygpygskhyacklrqgyc 192

QY 142 kslhrygmgecklttrpmmpcylsspedclmndvteknlnghnqaktfacktrsdgsc 201

Db 193 swyrgwppdkslinatdp 211

QY 202 awyrgaappkgefldiedp 220

Search completed: Mon May 4 14:49:28 1998
Job time : 28 secs.

Db	121	KMHTLDEFLVPMPTLTSTITOKKSLNHRVOMGCECKTRCPNICYSSPDECIMADWTE	180
Oy	121	nmlhtldeflvpmptltsttqtkkslnhygmceckitrcpmipoysspedclmndwte	180
Db	181	KSINGHOAKFFACIKRSDGSCAWRYGAAPPKQEFIDIEDP	220
Oy	181	kninghqakffacklrdsqscawrygaappkqefidiedp	220
RESULT	4	STANDARD;	PRT; 220 AA.
ID	TIM2_MOUSE		
AC	P25785;		
DT	01-MAY-1992 (REL. 22, CREATED)		
DT	01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)		
DT	01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF METALLOPROTEINASES-2).		
DE	TIMP2 OR TIMP-2.		
OS	MUS MUSCULUS (MOUSE).		
OC	EUKARYOTA; METAFOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;		
CC	EUTHERIA; RODENTIA.		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RC	STRAIN-BALB/C;		
RA	MEDLINE; 92290292.		
RA	SHIMIZU S., MATIK R., SEJIMA H., KISHI J.I., HAYAKAWA T., KOIWA O.;		
RL	GENE 114:291-292(1992).		
RN	[2]		
RP	SEQUENCE FROM N.A.		
RC	MEDLINE; 92347695.		
RA	LICO R.J., HAYDEN L.J., SHARMA R.R., ROCHELLEAU H., GREENBERG A.H.,		
RA	EDWARDS D.R.;		
RL	GENE 117:209-217(1992).		
RN	[3]		
RP	PRELIMINARY SEQUENCE OF 27-62.		
RX	MEDLINE; 91226375.		
RA	KISHI J.I., OGAWA K., YAMAMOTO S., HAYAKAWA T.;		
RA	MATRIX 11:10-16(1991).		
CC	-1 FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)		
CC	AND IRREVERSIBLY INACTIVATE THEM.		
CC	-1 PFM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.		
CC	-1 SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL; X62622; G54802; -		
DR	EMBL; M82858; G202052; -		
DR	EMBL; M93954; G202054; -		
DR	PIR; S15987; S15987.		
DR	PIR; JH0683; JH0683.		
DR	MGD; MG1:98753; TIMP2.		
DR	PROSITE; PS00288; TIMP. 1.		
KW	METALLOPROTEASE INHIBITOR; SIGNAL.		
FT	SIGNAL	1	26
FT	CHAIN	27	220
FT	DISULFID	29	98
FT	DISULFID	29	127
FT	DISULFID	39	152
FT	DISULFID	154	201
FT	DISULFID	172	193
FT	DISULFID	159	164
FT	CONFLICT	12	12
FT	CONFLICT	21	21
FT	CONFLICT	195	195
SEQ	SEQUENCE	220 AA;	24328 MW; BEC62EFC CRC32;
Query Match		93.0%;	Score 1536; DB 1; Length 220;
Best Local Similarity	91.4%;	Pred. No. 0.00e+00;	
Matches	201;	Conservative 12;	Mismatches 7; Indels 0; Gaps 0;
Db	1	MGAARSRLALGLILLASTLVPAADAGCSVPHROQLACNADVIRAKAVSEKEVDSGND	60
Oy	1	mgaarsrlalglillastlvpaadagcsvpvhroqlacnadvirakavskkevsgnd	60
Db	61	TCGNRTIVTGVTFQVTPFRCDPDIFETVVAASGVCNGVINGCKREVIVIAKKACDGC	120

OY 61 lypnpixrlsgyqlxlmfkyppddqdietylcapaavcgsldlgykkeyllagkaeng 120
 DB 121 KMHITLDEIYPMWTLSTOKKSLNHRWOMGCECKITPCMPICYSPPDECIWMDWTE 180
 OY 121 nmhtlccfltpwcltsatqkkslnhryqmccecltfcpmhpcyisspdeclwmdwte 180
 DB 181 KSIHQAKFEPACIKRSKSCAWYGAAPPROEFLIEDP 220
 OY 181 knlunghqakffacikrsdsgscawyrgaaprkqefldiedp 220
 RESULT 5
 ID TIM3_HUMAN STANDARD; PRT: 211 AA.
 AC P35625;
 DT 01-JUN-1994 (REL. 29, CREATED)
 DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (MIG-5 PROTEIN).
 TIMP3.
 HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 RN [1]
 RC SEQUENCE FROM N.A.
 RP TISSUE-KIDNEY;
 RX MEDLINE: 94215920.
 RA SLIBINGER S.M., JACOBSEN V.L., CUPPLES R.L., KOSKI R.A.;
 RL GENE 141:293-297(1994).
 RN [2]
 RC SEQUENCE FROM N.A.
 RP TISSUE-BREAST CARCINOMA;
 RX MEDLINE: 94228524.
 RA URIA J.A., FERRANDO A.A., VELASCO G., FREITE J.M., LOPEZ-OTIN C.;
 RL CANCER RES. 54:2091-2094(1994).
 RN [3]
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 94308155.
 RA WICK M., BUDGER C., BRUESSELBACH S., LUCIBELLO F., MUELLER R.;
 RL J. BIOL. CHEM. 269:18953-18960(1994).
 RN [4]
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 95290091.
 RA WILDE C.G., HAWKINS P.R., COLEMAN R.T., LEVINE W.B.,
 RL DELEGAUME A.M., OKAMOTO P.M., ITO L.Y., SCOTT R.W., SEILHAUER J.J.;
 RL DNA CELL BIOL. 13:711-718(1994).
 RN [5]
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 96404191.
 RA STOEHR H., ROOMP K., FELBOR U., WEBER B.H.F.;
 RL GENOME RES. 5:483-487(1995).
 RN [6]
 RC SEQUENCE FROM N.A.
 RP TISSUE-RETINAL PIGMENT EPITHELIUM;
 RX RUIZ A.C.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [7]
 RC SEQUENCE OF 42-211 FROM N.A.
 RP TISSUE-PLACENTA;
 RA HAMMANI K., HENRIET P.M., SLIBINGER S.M., DECICERK Y.A.;
 RL SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [8]
 RC SEQUENCE OF 14-211 FROM N.A.
 RP TISSUE-PLACENTA;
 RX MEDLINE: 94245184.
 RA APE S.S., MATTEI M.G., OLSEN B.R.;
 RL GENOMICS 19:86-90(1994).
 RN [9]
 RC VARIANTS SFD CYS-191 AND CYS-204.
 RP MEDLINE: 95201800.
 RA WEBER B.H.F., VOGT G., PROUET R.C., STOEHR H., FELBOR U.;
 RL NAT. GENET. 8:352-356(1994).

RN [10]
 RC VARIANTS SFD CYS-179.
 RP MEDLINE: 96177683.
 RA FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., WEBER B.H.F.;
 RL HUM. MOL. GENET. 4:2415-2416(1995).
 RN [11]
 RC VARIANTS SFD CYS-191.
 RP MEDLINE: 96341630.
 RA FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., APFELSTEDT-SYLLA E.,
 RL WEBER B.H.F.;
 J. MED. GENET. 33:233-236(1996).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
 CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
 CC -1- DISEASE: DEFECTS IN TIMP3 ARE THE CAUSE OF SORSEBY'S FUNDS DYSTROPHY (SFD), A RARE AUTOSOMAL DOMINANT MACULAR DISORDER WITH AN AGE OF ONSET IN THE FOURTH DECADE. IT IS CHARACTERIZED BY LOSS OF CENTRAL VISION FROM SUBRETINAL, NEOVASCULARIZATION AND ATROPHY OF THE OCULAR TISSUES. GENERALLY, MACULAR DISCIFORM DEGENERATION DEVELOPS IN THE PATIENTS EYE WITHIN 6 MONTHS TO 6 YEARS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC EMBL: U14394; G608129; -
 CC EMBL: U02571; G472310; -
 CC EMBL: X76227; G495252; -
 CC EMBL: Z30183; G520932; ALT_SEQ.
 CC EMBL: S78453; G998826; -
 CC EMBL: U33114; G1215682; -
 CC EMBL: U33110; G1215682; JOINED.
 CC EMBL: U33111; G1215682; JOINED.
 CC EMBL: U33112; G1215682; JOINED.
 CC EMBL: U38955; G1304484; JOINED.
 CC EMBL: U38952; G1304484; JOINED.
 CC EMBL: U38953; G1304484; JOINED.
 CC EMBL: U38954; G1304484; JOINED.
 CC EMBL: U67195; G1519558; -
 CC EMBL: L15078; G407035; -
 CC PIR: S45317; S45317.
 CC MIM: 188826; -
 CC MIM: 136900; -
 DR PROSITE: PS00288; TIMP; 1.
 DR KW METALLOPROTEINASE INHIBITOR; SIGNAL; DISEASE MUTATION.
 FT SIGNAL 1 23
 FT CHAIN 24 211
 FT DISULFID 24 91
 FT DISULFID 26 118
 FT DISULFID 36 143
 FT DISULFID 145 192
 FT DISULFID 150 155
 FT DISULFID 163 184
 FT VARIANT 179 179
 FT VARIANT 191 191
 FT VARIANT 204 204
 FT CONFLICT 16 16
 FT CONFLICT 18 19
 FT CONFLICT 21 22
 FT CONFLICT 22 23
 FT CONFLICT 23 23
 SQ SEQUENCE 211 AA; 24145 MW; 5FAL5ANA CRC32;
 Query Match 41.2%; Score 681; DB 1; Length 211.
 Best local Similarity 43.7%; Pred. No. 4,35e-150; Matches 87; Conservative 51; Mismatches 51; Indels 10; Gaps 8;
 DB 21 AEACTGSPHPDADFNSDIVIRAKYVGRKLVKEGP-FGT-L-V-YTIKOKMKTGFT 74
 OY 24 adacspsvnpqgafcnadivirakvknkvevsgndiygnpkiriyelqkqkmgkyp 82
 DB 75 KMPHYOYIHTFASLGLGLEVN-KYQYLLIGERY-DGKMTGLCNFVERDQTLRSR 132
 OY 83 d-qdletfitylapaavcgsyldlgykkeyllagkaengnmhtlccfltpwcltsatqk 141
 DB 133 KGLNRYHGLCNCKIKRSYYLPCFVTSKNKCLMTDMLSNFGYGYOSKHYACIPRGKGYC 192

Oy	142	kslnhyqmgceccitctcmjpcyisspdeclwmdwtetknhngdqakfacilkrdsqsc	201
Dd	193	swrgmwapdkssiinatdp	211
Oy	202	awyrqaapkpgefidiieqp	220

RESULT	6		
ID	TIME	CHICK	STANDARD;
			PRT;
212	AA.		

DT 01-AUG-1992 (REL. 23, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMD-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (21 KD PROTEIN OF EXTRACELLULAR MATRIX).
 GN TIMP3 OR TIMP-3
 OS GALUS GALUS (CHICKEN).
 CC EDUARDOI. METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE
 C. GALLIFORMES.

SEQUENCE FROM N.A.
TISSUE-EMERYONIC FIBROBLAST;
RX MEDLINE; 92381050.
RA PAVLOFF N., STASUS P.W., KISHANANI N.S., HAWKES S.P.,
RL J. BIOL. CHEM. 267:17321-17326(1992).

RP SEQUENCE OF 25-53.
RC TISSUE-FIBROBLAST;
RX MEDLINE; 91093162.
RA STJSCRS F.W.; NASIAR2 F.R.; PALTANCO L.J.; HAWKES S.P.;
RL J. BIOL. CHEM. 266:449-454(1991).
CC -I- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES
CC AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-
CC SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.

CC -I- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE T1MP FAMILY

DR EMBL; M94531; G211902; -
DR PIR; A39043; A39043.
DR PIR; A43429; A43429.

DR PROSITE; PS00288; TITIN
KW METALLOPROTEASE INHIBITORS

KW METALLOPROTEASE INHIBITOR; SIGNAL.

KW METALLOPROTEASE INHIBITOR; SIGNAL.

1	CHAIN	25	212	MEALLOPROTEINASE INHIBITOR 3
11	DISULFID	25	92	BY SIMILARITY.
17	DISULFID	27	119	BY SIMILARITY.
27	DISULFID	37	144	BY SIMILARITY.
37	DISULFID	146	193	BY SIMILARITY.
47	DISULFID	151	156	BY SIMILARITY.
57	DISULFID	164	185	BY SIMILARITY.
67	SEQUENCE	212 AA:	24504 MW:	C0489C6F C8C32:

Query Match	41.28;	Score 680;	DB 1;	Length 212;
Best Local Similarity	44.78;	Pred. No. 8.	22e-150;	
Matches	89;	Conservative	49;	Mismatches 51;
			Indels 10;	Gaps 8

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Db 22 AEAACGCVIHHODDACNSNDIYIIRAVVKKIKMLKQOP--FGT-M-R--TTVKQMMKURSEFO 75
Oy 24 adacgcvpvhpbqacmsndiyitrayvkkvegsndiygnpikrtiqeyikmktfy-p 82
Db 76 IMPHQQYLYTEASESLGCVKLEVN-KYQYLLITGRVY-EGKYVTGICMNYTEKMDRLTSQR 133
Oy 83 d-qdieflytpaaevcgysldigskketylagkvegsnmhltcditfpweltsatqk 144
Db 134 KGLNRYHLGCGGCKIRPCYTLRCPATSNNECIWTMDMLSNFGHSGHQAQKHYACIORBVCYC 199
Oy 142 kelnlrymgceckltirpmbprcylsspdeclmwdvteknlnsgqakftacikrdsdsc 200
Db 194 SWYRGMAPDKRTIINATPD 212
Oy 202 awyrgaapkpgerldeop 220

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RESULT	7		
ID	TIME	BOVIN	STANDARD;
			PRT;
			211 AA

AC P/9121;
DT 01-NOV-1997 (REL. 35, CREATED)

DE METALLOPROTEINASES-3).

GN 1. INT 3.
OS BOS TAURUS (BOVINE).
OC EURARICYTA; METAZA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA
OC EUTHERIA; ARTIODACTYLA.
111 291

RP SEQUENCE FROM N.A.
PC TISSUE-PLACENTA:
EX MEDLINE, 97138091.
RA SU S., DEHNADE F., ZAFARULLAH M.;
RL DNA CELL BIOL. 15:1039-1048(1996).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES
AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-
CC SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.

CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY

DR EMBL; 077588; G1684818; -
DR PROSITE; PS00288; TIMP; 1

KW	METALLOPROTEASE INHIBITOR; SIGNAL; DISEASE MUTATION.
ET	SIGNAL 1 33 POTENTIAL

FT	CHAINP	24	211	METALLOPROTEINASE INHIBITOR 3
FT	DISULFID	91	BY SIMILARITY.	
FT	DISULFID	26	BY SIMILARITY.	
FT	DISULFID	36	BY SIMILARITY.	
FT	DISULFID	145	BY SIMILARITY.	
FT	DISULFID	150	BY SIMILARITY.	
FT	DISULFID	153	BY SIMILARITY.	
FT	CARBOHYD	207	POTENTIAL.	
SQ	SEQUENCE	211 AA;	24197 NM;	2AEC2CB02 CRC32;

Query Match	40.7%;	Score 672;	DB 1;	Length 211;
Best Local Similarity	41.9%;	Pred. No. 1.33e-147;		
Matches	90;	Conservative	57;	Mismatches 56; Indels 12; Gaps 10;

[illegible]

QY 186 hqakffacikrsgdscawyrqaappkqefldledp 2200

RESULT	8		
ID	TIME3_MOUSE	STANDARD;	PRT; 211 AA.
AC	P39876;		
DT	01-FEB-1995	(REL. 31, CREATED)	
DT	01-FEB-1995	(REL. 31, LAST SEQUENCE UPDATE)	
DT	01-OCT-1996	(REL. 34, LAST ANNOTATION UPDATE)	
DT	METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIME-3) (TISSUE INHIBITOR OF		
DE	METALLOPROTEINASES-3).		
GN	TIME3 OR TIME-3 OR SUN.		
OS	MUS MUSCULUS (MOUSE).		
OC	EUTHAROTA, METAFOA;	CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;	
OC	EUTHAROTA, RODENTIA.		
RM	[1]		
RP	SEQUENCE FROM N.A.		
RX	MEDLINE; 94119361.		

RA LEOC K.J., KHOKHA R., PAVLOFF N., HAWKES S.P., EDWARDS D.R.;
RL J. BIOL. CHEM. 269:9352-9360(1994).
[2]
RP SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE-SKIN, AND LUNG;
RX MEDLINE: 94163596.
RA SUN Y., HEGAMTER G., COLBURN N.H.;
RL CANCER RES. 54:1139-1144(1994).
[3]
RN SEQUENCE FROM N.A.
RC TISSUE-LUNG;
RX MEDLINE: 95036582.
RA APTE S.S., HAYASHI K., SELDIN M.F., MATTEI M.-G., HAYASHI M.,
OLSEN B.R.;
RL DEV. DYN. 200:177-197(1994).
[4]
RN SEQUENCE FROM N.A.
RX MEDLINE: 95370262.
RA SUN Y., HEGAMTER G., KIM H., SITHANANDAM K., LI H., WATTS R.,
COLBURN N.H.;
RL J. BIOL. CHEM. 270:19312-19319(1995).
[5]
RN SEQUENCE FROM N.A.
RC STRAIN-129/SV;
RX MEDLINE: 95301511.
RA APTE S.S., OLSEN B.R., MURPHY G.;
RL J. BIOL. CHEM. 270:14313-14318(1995).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-
SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
CC -1- TISSUE SPECIFICITY: HIGHEST LEVELS ARE FOUND IN KIDNEY, LUNG AND
BRAIN FOLLOWED BY OVARY AND UTERUS. LOW LEVELS ARE FOUND IN BONE.
CC -1- INDUCTION: HIGHLY INDUCED BY PHORBOL ESTER (PMA), EGF AND
TRANSFORMING GROWTH FACTOR-BETA 1. ALSO INDUCED BY DEXAMETHASONE.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL: U27424; G439882; -;
DR EMBL: U230970; E264421; -;
DR EMBL: U19622; G438811; -;
DR EMBL: U26437; G1167534; -;
DR EMBL: U26433; G1167534; JOINED.
DR EMBL: U26434; G1167534; JOINED.
DR EMBL: U26435; G1167534; JOINED.
DR EMBL: U26436; G1167534; JOINED.
DR PIR: A53532; A53532.
DR PIR: A53052; A53052.
DR MGI: 98754; TIMP3.
PROSITE: PS00288; TIMP. 1.
METALLOPROTEINASE INHIBITOR; SIGNAL.
POTENTIAL.
FT CHAIN 1 23
FT DISULFID 24 211
FT DISULFID 26 91
FT DISULFID 36 118
FT DISULFID 143 143
FT DISULFID 145 192
FT DISULFID 150 155
FT DISULFID 163 184
SEQUENCE 211 AA: 24182 MW; CCB6E436 CRC32;
Query Match 40.7%; Score 672; DB 1; Length 211;
Best Local Similarity 43.7%; Pred. No. 1,33e-147;
Matches 87; Conservative 51; Mismatches 51; Indels 10; Gaps 8;

OY 142 kslhrygmgeckltctmpicpyspdeclmndwtetkninghgakffacklrsdsc 201
Db 193 SWYRGWAPPDKSISNADP 211
OY 202 awyrgaappkqgfidep 220
RESULT 9
ID TIM3 RAT STANDARD; PRT; 211 AA.
AC P48032;
DT 01-FEB-1996 (REL. 33, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF
DE METALLOPROTEINASES-3).
GN TIMP3 OR TIMP-3.
OS RATIUS NORVEGICUS (RAT).
OC EURAROTIA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RA MU I., MOSES M.A.;
RL SUBMITTED (MAY-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-
SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL: U27201; G971206; -;
DR PROSITE: PS00288; TIMP. 1.
RW METALLOPROTEINASE INHIBITOR; SIGNAL.
POTENTIAL.
FT CHAIN 1 23
FT DISULFID 24 211
FT DISULFID 26 91
FT DISULFID 36 118
FT DISULFID 143 143
FT DISULFID 145 192
FT DISULFID 150 155
FT DISULFID 163 184
SEQUENCE 211 AA: 24226 MW; 19624F2F CRC32;
Query Match 40.3%; Score 666; DB 1; Length 211;
Best Local Similarity 43.2%; Pred. No. 5.98e-146;
Matches 86; Conservative 51; Mismatches 52; Indels 10; Gaps 8;
Db 21 TEACGSPSHQDAFCNSNDIYIRAKVNGKTIYKGP--FGT-L--V-YTIKQMKRYGFS 74
OY 24 adacscspvhpqafcnadivirakvngkvedsgndlynpikrlyqelkqimfkp 82
Db 75 KMPHYOYIHTAESLGLKLEVN-KYOYLITGRVY-EGKMYTGLCNFVERMDHLTLRSOR 132
OY 83 d-qdieflytpaavaavgsldigskkeyliagkaegngnmhltcdifvpwdtlisatqk 141
Db 133 KGLNRYHGLGNCCKIKSKSYLLPCFVTSKKECLMTDMSNFGYSGYOSKHYACIRKGGYC 192
OY 142 kslhrygmgeckltctmpicpyspdeclmndwtetkninghgakffacklrsdsc 201
Db 193 SWYRGWAPPDKSISNADP 211
OY 202 awyrgaappkqgfidep 220
RESULT 10
ID TIM1 BOVIN STANDARD; PRT; 207 AA.
AC P20414;
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (EMBRYOGENIN-1) (EG-
1) TIMP1.
OS BOS TAUROS (BOVINE).
OC EURAROTIA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;

OC EUTHERIA; ARTIODACTYLA.
 RN [1]
 RC SEQUENCE FROM N.A.
 RX MEDLINE: 90365711.
 RA FREDENSTEIN J., WAGNER S., LUCK R.M., EINSPIANIER R., SCHEIT K.H.;
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 171:250-256(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 94257757.
 RA SATOH T., KOBAYASHI K., YAMASHITA S., KIKUCHI M., SENDAI Y., HOSHI H.;
 RL BIOL. REPROD. 50:835-844(1994).
 RN [3]
 RP PRELIMINARY SEQUENCE OF 24-69.
 RX MEDLINE: 90008914.
 RA DE CIERCK T.A., YEAN T.D., RATZKIN B.J., LU H.S., LANGLEY K.E.;
 RL J. BIOL. CHEM. 264:17445-17453(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 EMBL: M60073; G163761; -
 DR EMBL: 570841; G546974; -
 DR PIR: B34468; B34468.
 DR PROSITE: PS00288; TIMP: 1.
 DR GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
 KW SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93 BY SIMILARITY.
 FT DISULFID 26 122 BY SIMILARITY.
 FT DISULFID 36 147 BY SIMILARITY.
 FT DISULFID 150 197 BY SIMILARITY.
 FT DISULFID 155 160 BY SIMILARITY.
 FT DISULFID 168 189 BY SIMILARITY.
 FT CARBOHYD 53 53 POTENTIAL.
 FT CARBOHYD 101 101 POTENTIAL.
 SQ SEQUENCE 207 AA; 23031 MW; 2D1LED5F CRC32;
 Query Match 31.0%; Score 512; DB 1; Length 207;
 Best Local Similarity 38.9%; Pred. No. 6.82e-104;
 Matches 77; Conservative 43; Mismatches 71; Indels 7; Gaps 7;
 DB 6 PMASGILLMLAPRACCTVPPHPOTAFNCSDVIRAFVGTAEVNE-TALYOREIK 64
 QY 9 plafclllllgcllpradacscspvhpqatcnadivlrakavkkevsgndlygn-plk 67
 DB 65 MTR-MKGFQALDA-PDIRFITYPAMESVCGYFHRSHNSEELLTLAGOL-SNGHLHTT 121
 QY 68 rlygelqlmfmkfyppdqddeliyltapaavcysldigkge-yllagkaegngnmhlcl 126
 DB 122 CSFVAPMNSLSAQRGFTTYVGCCECTVFPCSSIPCKLQSDTHCLMTDOLITGSDKG 181
 QY 127 cdfivpwtltsaqkkslnhygmge-ckltrcpmlpcylsspdeclwmdvteknng 185
 DB 182 FOSRHLCAPREPGLCTW 199
 QY 186 hgakffackltsdgscaaw 203
 RESULT 11
 ID TIML_PAPCY STANDARD; PRT; 207 AA.
 AC P49061;
 DT 01-FEB-1996 (REL. 33, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
 GN TIMP1.
 OS PAPIO CYNOCEPHALUS (YELLOW BABOON).
 OS EUBAROTOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 RA [1]

RP SEQUENCE FROM N.A.
 RC TISSUE-AORTA;
 RX MEDLINE: 96011646.
 RA FOROUGH R., NIKKARI S.T., HASENSTAB D., LEA H., CLOWES A.W.;
 RL GENE 163:267-271(1995).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 EMBL: L37295; G561546; -
 DR PROSITE: PS00288; TIMP: 1.
 DR GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
 KW SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93 BY SIMILARITY.
 FT DISULFID 26 122 BY SIMILARITY.
 FT DISULFID 36 147 BY SIMILARITY.
 FT DISULFID 150 197 BY SIMILARITY.
 FT DISULFID 155 160 BY SIMILARITY.
 FT DISULFID 168 189 BY SIMILARITY.
 FT CARBOHYD 53 53 POTENTIAL.
 FT CARBOHYD 101 101 POTENTIAL.
 SQ SEQUENCE 207 AA; 23213 MW; 14EFBD4E CRC32;
 Query Match 31.0%; Score 511; DB 1; Length 207;
 Best Local Similarity 39.9%; Pred. No. 1.27e-103;
 Matches 79; Conservative 40; Mismatches 72; Indels 7; Gaps 7;
 DB 6 PMASGILLMLAPRACCTVPPHPOTAFNCSDVIRAFVGTAEVNE-TALYOREIK 64
 QY 9 plafclllllgcllpradacscspvhpqatcnadivlrakavkkevsgndlygn-plk 67
 DB 65 MTR-MKGFQAL-GDAADIRFITYPAMESVCGYFHRSHNSEELLTLAGOL-DGLHTT 121
 QY 68 rlygelqlmfmkfyppdqddeliyltapaavcysldigkge-yllagkaegngnmhlcl 126
 DB 122 CSFVAPMNSLSAQRGFTTYVGCCECTVFPCSSIPCKLQSDTHCLMTDOLITGSDKG 181
 QY 127 cdfivpwtltsaqkkslnhygmge-ckltrcpmlpcylsspdeclwmdvteknng 185
 DB 182 FOSRHLCAPREPGLCTW 199
 QY 186 hgakffackltsdgscaaw 203
 RESULT 12
 ID TIML_HUMAN STANDARD; PRT; 207 AA.
 AC P01033; Q14252;
 DT 21-JUL-1986 (REL. 01, CREATED)
 DT 21-JUL-1986 (REL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (ERYTHROID
 POTENTIATING ACTIVITY) (EPA) (TISSUE INHIBITOR OF METALLOPROTEINASES)
 (FIBROBLAST COLLAGENASE INHIBITOR) (COLLAGENASE INHIBITOR).
 GN TIMP1 OR TIMP.
 OS HOMO SAPIENS (HUMAN).
 OS EUBAROTOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 RA [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 86040463.
 RA DOCHERTY A.J.P., LYONS A., SMITH B.J., WRIGHT E.M., STEPHENS P.E.,
 RA HARRIS T.J.R., MORPHY G., REYNOLDS J.J.;
 RL NATURE 318:66-69(1985).
 GN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 85240567.
 RA GAUSON J.C., GOLDE D.W., KAUFMAN S.E., WESTBROOK C.A., HENICK R.M.,
 RA KAUFMAN R.J., WONG G.G., TEMPLE P.A., LEARY A.C., BROWN E.L.,
 RA ORR E.C., CLARK S.C.;
 RL NATURE 315:768-771(1985).

RN [3] SEQUENCE FROM N.A.
 RP MEDLINE: 86205964.
 RX CAMITHAL D.F., SOMMER A., THOMPSON R.C., ANDERSON D.C., SMITH C.G.,
 RA WEIGUS H.G., STRICKLIN G.P.;
 RL J. NATL. ACAD. SCI. U.S.A. 83:2407-2411(1986).
 RN [4]
 RP SEQUENCE FROM N.A.
 RA KATZOREK M., HONORE N., RIBES V., DEHOUX P., CORNET P., CARTWRIGHT T.
 RL STREECK R.E.;
 RL BIOTECHNOLOGY 5:595-598(1987).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE-OVARY;
 RX MEDLINE: 91025550.
 RA RAP G., FREUDENSTEIN J., KLAUDINY J., MÜCHA J., WEMPE F., ZIMMER M.,
 RA SCHEIT K.H.;
 RL DNA CELL BIOL. 9:479-485(1990).
 RN [6]
 RP SEQUENCE FROM N.A.
 RL MEDLINE: 94123576.
 RX OPBROEK A., KENNEY M.C., BROWN D.;
 RL CURR. EYE RES. 12:877-883(1993).
 RN [7]
 RP SEQUENCE OF 42-207 FROM N.A.
 RA MATSUDA T., KOHNO K., KUWANO M.;
 RL SUBMITTED (JUL-1992) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [8]
 RP SEQUENCE OF 1-40 FROM N.A.
 RA HARDCASTLE A.J.;
 RL SUBMITTED (SEP-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [9]
 RP DISULFIDE BONDS, AND PARTIAL SEQUENCE.
 RX MEDLINE: 90303199.
 RA WILLIAMSON R.A., MARTSON F.A.O., ANGAL S., KOKITIS P., PANICO M.,
 RA MORRIS H.R., CARNE A.F., SMITH B.J., HARRIS T.J.R., FREEDMAN R.B.;
 RL BIOCHEM. J. 268:267-274(1990).
 RN [10]
 RP SEQUENCE OF 24-38.
 RX TISSUE-SYNOVIAL FLUID;
 RL MEDLINE: 92111776.
 RA OSHINES A., KNUDEPER V., OBERHOEF R., REINKE H., TSCHESCHE H.;
 RL FEBS LETT. 296:16-20(1992).
 RN [11]
 RP NOTAGENESIS.
 RP MEDLINE: 93041700.
 RX O'SHEA M., WILLEBROCK F., WILLIAMSON R.A., COCKETT M.I.,
 RX FLEEMAN R.B., REYNOLDS J.J., DOCHERTY A.J.P., MURPHY G.;
 RL BIOCHEMISTRY 31:10146-10152(1992).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES
 CC AND IRREVERSIBLY INACTIVATES THEM. ALSO MEDIATES ERYTHROPOIETIS IN
 CC VITRO. BUT, UNLIKE IL-3, IT IS SPECIES-SPECIFIC, STIMULATING THE
 CC GROWTH AND DIFFERENTIATION OF ONLY HUMAN AND MURINE ERYTHROID
 CC PROGENITORS.
 CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 CC DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC EMBL: X03124, G37183, -;
 CC EMBL: M12670, G182483, -;
 CC EMBL: X02598, G31189, -;
 CC EMBL: M59906, G189382, -;
 CC EMBL: S68252, E119406, -;
 CC EMBL: D11139, G220125, -;
 CC EMBL: L47361, G994731, -;
 CC EMBL: A10416, G490094, -;
 CC PIR: A01269, ZYHDEP.
 CC PIR: A23534, A23534.
 CC PIR: A35826, A35826.
 CC PIR: S20318, S20318.
 CC MTM: 305370.
 CC PROSITE, PS00288, TIMP, 1.
 CC GLYCOPROTEIN: METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
 CC SIGNAL.

FT	SIGNAL	1	23	
FT	CHAIN	24	207	METALLOPROTEINASE INHIBITOR 1.
FT	DISULEID	24	93	
FT	DISULEID	26	122	
FT	DISULEID	36	147	
FT	DISULEID	150	197	
FT	DISULEID	155	160	
FT	DISULEID	168	189	
FT	CARBOHYD	53	53	POTENTIAL.
FT	CARBOHYD	101	101	POTENTIAL.
FT	CONFLICT	23	23	A -> P (IN G1189).
FT	CONFLICT	44	44	A -> P (IN REF. 7).
SO	SEQUENCE	207 AA:	23171 MM:	8B753BAE CRC32:
Query Match				
Best Local Similarity 31.0% Score 511; DB 1; Length 207;				
Matches 79; Conservative 40; Mismatches 72; Indels 7; Gaps 7				
Db	6	PLASGILLMLLPASACICVPHPOATACNSDYLAFVAFVGTPEVNOQT-LYQREIK 64		
Qy	9	placilililgtllpradacscspvhpqatcnadivirakavkhkevsgndlygn-pik 67		
Db	65	MTK-MYGFQAL-CDADIFPVTPAMESVCGYFHRSHNSSEPLNGKIQ-DSILHITT 121		
Qy	68	riqyeikqimkispqdqiefilycapaavcysldigkike-yllagkaengnmiltl 126		
Db	122	CSFAPAPNNSLSLAORRFTTYVTVGCEECVFPCLISPCIKLQSGTHCLMTDQLQSGSEK 181		
Qy	127	cdfivpwtltsatqkclnhrygmce-cchitcpmlpcylsspdeclmndwvtekhng 185		
Db	182	FQSRHLACLPRPGLCTW 199		
Qy	186	hgakfiacikrdsqscaw 203		
RESULT 13				
ID	TM1_RABIT	STANDARD;	PRT;	206 AA.
AC	P20614;			
DT	01-FEB-1991 (REL. 17, CREATED)			
DT	01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)			
DT	01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)			
DE	METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).			
GN	TMPI.			
OS	ORCTOLAGUS CUNICULUS (RABBIT).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;			
OC	EUTHERIA; LAGOMORPHA.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 89214135.			
RA	HOROWITZ S., DAFNI N., SHAPIRO D.T., HOLM B.A., NOTTER R.H.,			
RA	QUIBLE D.J.;			
RL	J. BIOL. CHEM. 264:7092-7095(1989).			
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)			
CC	AND IRREVERSIBLY INACTIVATE THEM.			
CC	-1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF			
CC	DISULFIDE BONDS.			
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.			
DR	EMBL: J04712; G165743; -			
DR	PIR: A33350; A33350.			
DR	PROSITE: PS00288; TIMP.1.			
KW	GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;			
KW	SIGNAL.			
FT	SIGNAL	1	23	
FT	CHAIN	24	206	METALLOPROTEINASE INHIBITOR 1.
FT	DISULEID	24	93	BY SIMILARITY.
FT	DISULEID	26	122	BY SIMILARITY.
FT	DISULEID	36	147	BY SIMILARITY.
FT	DISULEID	150	196	BY SIMILARITY.
FT	DISULEID	155	160	BY SIMILARITY.
FT	DISULEID	168	188	BY SIMILARITY.
FT	CARBOHYD	53	53	POTENTIAL.
FT	CARBOHYD	101	101	POTENTIAL.
SO	SEQUENCE	206 AA:	22758 MM:	77ZEEFIO CRC32:

Query Match	30.8%	Score 508	DB 1	Length 206
Best Local Similarity 39.9%				
Matches 79	Conservative 38	Mismatches 73	Indels 8	Gaps 8
Db	6	ALASSMLLLMVAVPSRACCTVCPHPQTAFCNSDLVIRAKVGAEVNHRT-LYOREIK 64		
Qy	9	flafclllllgllpradaccspvhpqgafcnadivlrakvnnkxevdsgndlygn-pik 67		
Db	65	TTK-MEKFPDGL-GHATDIREVYTPAMSVCCGYSHKSONKSEEPFLINGQLR-NGLHITT 121		
Qy	68	rlqyelkqiklmfkspdqdeifelytapaavcgvslidgykke-yllagkaeqngmhlitl 126		
Db	122	CSFVPMNLSFSQSSGGTKTYTAAGCDMCYCFACASICHTSEPTHCMLTDDSLGSD-KG 180		
Qy	127	cdflvpvdlstestqtkslnhlygmge-cltkrcpmlpcylsspedclmwtvrekng 185		
Db	181	FQSRHLACLPOEPGICAW 198		
Qy	186	hqakffacikrtdsgscav 203		
RESULT 14				
ID	TIME	SHEEP	STANDARD	PRT: 207 AA.
AC	P501122			
DT	01-OCT-1996	(REL. 34, CREATED)		
DT	01-OCT-1996	(REL. 34, LAST SEQUENCE UPDATE)		
DT	01-OCT-1996	(REL. 34, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).			
GN	TIMP1.			
OS	OVIS ARIES (SHEEP).			
OC	EUTARCYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;			
CC	EUTHERIA; ARTIODACTYLA.			
RP	SEQUENCE FROM N.A.			
RC	TISSUE-CORPORA LOTEA;			
RX	MEDLINE; 94102210.			
RL	SMITH G.W., GOETZ T.L., ANTHONY R.V., SMITH M.F.;			
CC	EMBOCRINOLOGY 134:344-352(1994).			
CC	-I- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)			
CC	AND IRREVERSIBLY INACTIVATE THEM.			
CC	-I- P1M: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF			
CC	DISULFIDE BONDS.			
CC	-I- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.			
DR	EMBL; S67450; G456990; -			
DR	PROSITE; P500288; TIMP: 1.			
KM	GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;			
	SIGNAL.			
FT	SIGNAL	1	23	BY SIMILARITY.
FT	CHAIN	24	207	METALLOPROTEINASE INHIBITOR 1.
FT	DISULFID	24	93	BY SIMILARITY.
FT	DISULFID	26	122	BY SIMILARITY.
FT	DISULFID	36	147	BY SIMILARITY.
FT	DISULFID	150	197	BY SIMILARITY.
FT	DISULFID	155	160	BY SIMILARITY.
FT	DISULFID	168	189	BY SIMILARITY.
FT	CARBOHYD	53	53	POTENTIAL.
FT	CARBOHYD	101	101	POTENTIAL.
SEQ	SEQUENCE	207 AA:	23057 MM:	890A6EEB CRC32;
Query Match	30.8%	Score 508	DB 1	Length 207
Best Local Similarity 38.9%				
Matches 75	Conservative 42	Mismatches 68	Indels 8	Gaps 8
Db	12	LLLL-WLTPASACVCVPHPTATCNSGVYIRAFVGTAEVNE-TALYQYEIKMKR-M 68		
Qy	14	llllglllpradaccspvhpqgafcnadivlrakvnnkxevdsgndlygn-pikriqye 72		
Db	69	EKGFSALRDA-DIRIRYTPAMSVCCGYSHKSONKSEEPFLINGQLR-NGLHITTCSFVA 126		
Qy	73	lqykmlfkspdqdeifelytapaavcgvslidgykke-yllagkaeqngmhlitl 131		
Db	127	PWNSSAORRGFTKYTAAGCECTVFCSSIPCKIQSDTHCLMTDQLLTGSDKGFOSRH 186		

Oy	132	pwtlslatgktslnhrygmce-ckltcrpmlpcylaspsdeclmndwvtekhngnqkft	190
Db	187	LACLPREPGMCTW	199
Oy	191	facitkrsdgscaaw	203
RESULT	15		
ID	TM1.MOUSE	STANDARD;	PRT; 205 AA.
AC	P12032; P20064;		
DT	01-OCT-1989 (REL. 12, CREATED)		
DT	01-MAY-1991 (REL. 18, LAST SEQUENCE UPDATE)		
DT	01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (ERYTHROID		
DE	POTENTIATING ACTIVITY) (PEA) (TISSUE INHIBITOR OF METALLOPROTEINASES)		
DE	(COLLAGENASE INHIBITOR 1608 FIBROBLAST) (TPA-INDUCED PROTEIN)		
DE	(TPA-SI).		
GN	TM1P1 OR TIMP-1 OR TIMP.		
OS	MUS MUSCULUS (MOUSE).		
OC	EUFAROTIA; METACOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;		
OC	EUFAROTIA; RODENTIA.		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RX	MEDLINE: 87218524.		
RA	GENERT D.R., COLOMBE B., CASTELINO M., SKUP D., WILLIAMS B.R.G.;		
RL	EMBO J. 6:651-657(1987).		
RP	[2]		
RP	SEQUENCE FROM N.A.		
RC	TISSUE-FIBROBLAST;		
RX	MEDLINE: 87066763.		
RA	EDWARDS D.R., WATERHOUSE P., HOLMAN M.L., DENHARDT D.T.;		
RL	NOCTURNIC ACIDS RES. 14:8863-8878(1986).		
RN	[3]		
RP	SEQUENCE FROM N.A.		
RC	STRAIN-C3H;		
RX	MEDLINE: 88038821.		
RA	JOHNSON M.D., HOUSEY G.M., KIRSCHMEIER P.T., WEINSTEIN I.B.;		
RL	MOL. CELL. BIOL. 7:2821-2829(1987).		
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES		
CC	AND IRREVERSIBLY INACTIVATE THEM. ALSO MEDIATES ERYTHROPOIESIS IN		
CC	VITRO. BUT, UNLIKE IL-3, IT IS SPECIES-SPECIFIC, STIMULATING THE		
CC	GROWTH AND DIFFERENTIATION OF ONLY HUMAN AND MARINE ERYTHROID		
CC	PROGENITORS.		
CC	-1- TISSUE SPECIFICITY: FOUND IN FETAL AND ADULT TISSUES. HIGHEST		
CC	LEVELS ARE FOUND IN BONE. ALSO FOUND IN LUNG, OVARY AND UTERUS.		
CC	-1- INDUCTION: BY VIRUS.		
CC	-1- INDUCTION: REGULATED BY TUMOR PROMOTERS AND MITOGENS THROUGH		
CC	PROTEIN KINASE C.		
CC	-1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF		
CC	DISULFIDE BONDS.		
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL; M28312; G193042; -.		
DR	EMBL; M28308; G193042; JOINED.		
DR	EMBL; M28309; G193042; JOINED.		
DR	EMBL; M28310; G193042; JOINED.		
DR	EMBL; M28311; G193042; JOINED.		
DR	EMBL; X04684; G49704; -.		
DR	EMBL; M17243; G202112; -.		
DR	EMBL; M28312; G193042; -.		
DR	PIR; A26633; A26633.		
DR	PIR; A26106; A26106.		
DR	PIR; A26917; A26917.		
DR	MGI; MGI:98752; TIMP.		
DR	PROSITE; PS00288; TIMP. 1.		
KM	GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;		
KM	SIGNAL.		
FT	SIGNAL.	1	24
FT	CHAIN	25	205
FT	DISULFID	25	94
FT	DISULFID	27	123
FT	DISULFID	37	148
FT	DISULFID	151	197
			BY SIMILARITY.
			BY SIMILARITY.


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RN [12]
RP SEQUENCE FROM N.A.
RC STRAIN-BRISTOL N2;
RA WU X, LE TT.;
RL SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [13]
RP SEQUENCE FROM N.A.
RC STRAIN-BRISTOL N2;
RA WATERSTON R.;
RL SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
SR EMBL; U53336; G1255824;
SQ SEQUENCE 158 AA; 17465 MW; FBD8E3BD CRC32;

Query Match 12.9%; Score 213; DB 3; Length 158;
Best Local Similarity 28.7%; Pred. No. 5,02e-26;
Matches 37; Conservative 38; Mismatches 44; Indels 10; Gaps 8;

Db 4 LSLILVILVLIATVLAACRCRGSTKESFENAHVSHVKYRVGKGLPEGSEKRG--L 61
Oy 10 lafcililglllpdadscspvtpgafcnad-iv-iraka-vnkkevsngndlygnpl 66
Db 62 NNLRYVOHVEVEFKPSNMTTLPDEIFTPSEAPAG--LTKAAGHEYLLAGVGEPPNALY 119
Oy 67 krlgylqklmqfkgp-dgd-1-eflytpaaavcysldlgkkeyllagkaeugnmh 123
Db 120 TVLCGVLP 128
Oy 124 ltlcdflvp 132

RESULT 8
ID Q61720 PRELIMINARY; PRT; 38 AA.

AC Q61720;
DT 01-NOV-1996 (TREMBLREL, 01, CREATED)
DT 01-NOV-1996 (TREMBLREL, 01, LAST SEQUENCE UPDATE)
DT 01-FEB-1997 (TREMBLREL, 02, LAST ANNOTATION UPDATE)
DE MESSENGER RNA FRAGMENT FOR MOUSE INTERPERON BETA (TYPE 1) CODING FOR
DE THE C-TERMINAL PART (FRAGMENT).
OS MUS MUSCULUS (MOUSE).
OC EUMAROTIA; METAPOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE; 82247191.
RA SKIP D.; WINDASS J.D.; SOR F.S.; GEORGE H.; WILLIAMS B.R.G.;
RA FUGUHARA H.; DE MAEYER-GUIGNARD J.; DE MAEYER E.;
RL NUCLEOTIC ACIDS RES. 10:3069-3084(1982).
DR EMBL; Y00755; G817965; -.
DR EMBL; J00425; G194118; -.
FT NON_TER 1
SQ SEQUENCE 38 AA; 4390 MW; 429816C2 CRC32;

Query Match 6.0%; Score 99; DB 10; Length 38;
Best Local Similarity 40.6%; Pred. No. 1.60e-02;
Matches 13; Conservative 7; Mismatches 11; Indels 1; Gaps 1;

Db 2 CLMTDOVLVGS-EDYOSRHFACLPRLNGLCWTW 32
Oy 172 clmwvteknghgqkfiacltisdgscaw 203

RESULT 9
ID Q40271 PRELIMINARY; PRT; 512 AA.

AC Q40271;
DT 01-NOV-1996 (TREMBLREL, 01, CREATED)
DT 01-NOV-1996 (TREMBLREL, 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLREL, 05, LAST ANNOTATION UPDATE)
DE MYO-INOSITOL-1-PHOSPHATE SYNTHASE.
DE MEMBRANANTHEMUM CRYSTALLINUM (COMMON ICE PLANT).
DE EDAROTIA; PLANTA; EMERIOPIHTA; ANGIOSPERMAE; DICOTYLEDONEAE;
OC CARYOPHYLLALES; ALIZOCEAE.

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RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 96208959.
RA ISHITANI M., BOJNDER A.L., BORNGHUSER A., MICHALOWSKI C.B.,
RU JENSEN R.G., ROHNERT H.J.:
RL PLANT J. 9:537-548(1996).
DR EMBL; U32511; G975888;
SQ SEQUENCE 512 AA; 56758 MW; 8F97FE26 CRC32;

Query Match 5.6%; Score 92; DB 8; Length 512;
Best Local Similarity 34.6%; Pred. No. 2.23e-01;
Matches 18; Conservative 13; Mismatches 17; Indels 4; Gaps 3;

DB 275 EENIPFINSPOFTFVGL-IDLAIKNSLIGDDFGSGOTKMSVLYDFLV 325
OY 83 dgdleffytapaa-vegvaldldgkkeyllagka--egnmhltcdftiv 131

RESULT 10
ID 048297 PRELIMINARY; PRT; 668 AA.

048297;
01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE HISTIDINE KINASE.
GN CHEA.
OS HALOBACTERIUM SALINARIUM.
OC ARCHAEABACTERIA; EURYARCHAEOTA; HALOBACTERIALES; HALOBACTERIACEAE.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95188871.
RA RUDOLPH J., OESTERHELT D.,
RL EMBL J. 14:667-673(1995).
DR EMBL; X82645; G671100;
SQ SEQUENCE 668 AA; 71931 MW; 3D4B7F92 CRC32;

Query Match 5.6%; Score 92; DB 9; Length 668;
Best Local Similarity 38.9%; Pred. No. 2.23e-01;
Matches 14; Conservative 9; Mismatches 12; Indels 1; Gaps 1;

DB 549 VESGGEYGPITVD-EISRMKSVKSVDEEVITY 583
OY 55 vdsqndlygnpikrlyqelkqkxkfygpdqdiety 90

RESULT 11
ID 039353 PRELIMINARY; PRT; 376 AA.

039353;
01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE CELL WALL-PLASMA MEMBRANE LINKER PROTEIN.
GN PRP.
OS BRASSICA NAPUS (RAPE).
OC EUKARYOTA; PLANTA; EMBOYOPHYTA; ANGIOSPERMAE; DICOTYLEDONAE;
OC CAPRALES; CERICERAE.
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN-CV. COBRA;
RA GOODWIN W.G., PALLAS J.A., JENKINS G.I.;
RL SUBMITTED (JAN-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; X94976; E218269;
SQ SEQUENCE 376 AA; 38667 MW; FD5D37DD CRC32;

Query Match 5.5%; Score 91; DB 8; Length 376;
Best Local Similarity 44.1%; Pred. No. 3.21e-01;
Matches 15; Conservative 10; Mismatches 7; Indels 2; Gaps 2;

DB 1 MGSITONLSFLI-LLIG-FLAVSFACGCPPP 32
OY 1 mgsaarsiplatcilllilpradacscspvp 34
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RESULT 12
ID 061259 PRELIMINARY; PRT; 113 AA.

061259;
01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE 01-JAN-1998 (TREMREL. 05, LAST ANNOTATION UPDATE)
DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL TYPE II MRNA) (FRAGMENT).
GN ABL.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 86133550.
RA BEN-MERIAH Y., BERNARDS A., PARKIND M., DALEY G.Q., BALTIMORE D.;
RL CELL 44:577-586(1986).
DR EMBL; M12263; G191561;
DR MGD; MGT:87859; ABL.
FT NON_TER 113
SQ SEQUENCE 113 AA; 12519 MW; 0393ACE7 CRC32;

Query Match 5.4%; Score 89; DB 10; Length 113;
Best Local Similarity 42.1%; Pred. No. 6.61e-01;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 45 KENILAGPSNDPLFVALYDFVAGDNTLSTKGEKL 82
OY 108 keylaagkaegnunhltcdftivpd-tlsatqkxsl 144

RESULT 13
ID 061260 PRELIMINARY; PRT; 114 AA.

061260;
01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE 01-JAN-1998 (TREMREL. 05, LAST ANNOTATION UPDATE)
DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL TYPE III MRNA) (FRAGMENT).
GN ABL.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 86133550.
RA BEN-MERIAH Y., BERNARDS A., PARKIND M., DALEY G.Q., BALTIMORE D.;
RL CELL 44:577-586(1986).
DR EMBL; M12264; G191563;
DR MGD; MGT:87859; ABL.
FT NON_TER 114
SQ SEQUENCE 114 AA; 12820 MW; 1CB4813E CRC32;

Query Match 5.4%; Score 89; DB 10; Length 114;
Best Local Similarity 42.1%; Pred. No. 6.61e-01;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 46 KENILAGPSNDPLFVALYDFVAGDNTLSTKGEKL 83
OY 108 keylaagkaegnunhltcdftivpd-tlsatqkxsl 144

RESULT 14
ID 013691 PRELIMINARY; PRT; 115 AA.

013691;
01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE 01-NOV-1996 (TREMREL. 01, LAST ANNOTATION UPDATE)
DE ABL PROTEIN (FRAGMENT).
GN ABL.
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OS HOMO SAPIENS (HUMAN)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.

RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 85240529
 RA SHITVEIMAN E., LIFSHTZ B., GALE R.P., CANANI E.;
 RL NATURE 315:550-554(1985).
 DR EMBL: M30833; G553164; -
 FT NON_TER 115
 SQ SEQUENCE 115 AA; 12628 MW; A9EB2733 CRC32;

Query Match 5.4%; Score 89; DB 2; Length 115;
 Best Local Similarity 42.1%; Pred. No. 6.61e-01;
 Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 51 KENTLAGPSENDPNTLFVALYDFVAGSDNTLSTIRGKSL 88
 QY 108 keyllagkaegngnmhltlclfdilvpwd-cllsatqkksl 144

.SULF 15
 ID P97896 PRELIMINARY; PRT; 119 AA.

AC P97896;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
 DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL PROTEIN) (FRAGMENT).
 GN ABL.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; RODENTIA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 86133550.
 RA BEN-NERIAH Y., BERNARDS A., PASKIND M., DALEY G.Q., BALTIMORE D.;
 RL CELL 44:577-586(1986).
 RN [2]
 RP SEQUENCE OF 1-26 FROM N.A.
 RC STRAIN-BALB/C; TISSUE-LIVER;
 RX MEDLINE: 88202920.
 RA BERNARDS A., PASKIND M., BALTIMORE D.;
 RL ONCOGENE 2:297-304(1988).
 DR EMBL: K03228; G191559; -
 DR EMBL: X07539; G49838; -
 DR EMBL: M12266; G553852; -
 MG: MGI:87859; ABL.
 NON_TER 119
 SQ SEQUENCE 119 AA; 13013 MW; 92DAB735 CRC32;

Query Match 5.4%; Score 89; DB 10; Length 119;
 Best Local Similarity 42.1%; Pred. No. 6.61e-01;
 Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 51 KENTLAGPSENDPNTLFVALYDFVAGSDNTLSTIRGKSL 88
 QY 108 keyllagkaegngnmhltlclfdilvpwd-cllsatqkksl 144

Search completed: Mon May 4 14:47:55 1998
 Job time : 24 secs.

QY 61 tynpnlkrltqyelkqkmlfkypkexdiefitytapsavcgsyldvggkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220
QY 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220

RESULT 2
ID R62769 standard; Protein: 220 AA.
AC R62769;
DT 13-JUL-1995 (first entry)
DE Human metalloproteinase inhibitor.
KW Metalloproteinase inhibitor; tumour cell dissemination;
KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
KW emphysema; osteoporosis; MI gene disorders.
OS Homo sapiens.
Key Location/Qualifiers
peptide 1..26
/label= sig_peptide

PN EP-623676-A.
PD 09-NOV-1994.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PA (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI Boone TC, Declerck YA, Langley KE;
DR WPI; 94-343309/43.
DR N-PSDB; Q73088.
PT New metalloproteinase inhibitor, analogues and DNA - for
PT treating tumour cell dissemination, rheumatoid arthritis and for
PT large-scale recombinant inhibitor prodn.
CC Claim 8, Fig 2, 63pp; English.
CC 073088 encodes R62769 human metalloproteinase inhibitor (MI), it
CC may be used to inhibit tumour cell dissemination and for treating
CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
CC and osteoporosis. The DNA may be used to detect MI gene disorders.
SQ Sequence 220 AA.

Query Match 100.0%; Score 1643; DB 12; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.41e-169;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 mgsaartlrlalqlllallrlpadacscspvhpqgafcnadvirakavsekevdsnd 60
|||||
1 mgsaartlrlalqlllallrlpadacscspvhpqgafcnadvirakavsekevdsnd 60
DB 61 tynpnlkrltqyelkqkmlfkypkexdiefitytapsavcgsyldvggkkeyllagkaegd 120
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefitytapsavcgsyldvggkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220
QY 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220

RESULT 3
ID R07955 standard; Protein: 220 AA.
AC R07955;
DT 21-FEB-1991 (first entry)
DE Human metalloproteinase inhibitor gene product.
KW Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;
KW scleroderma; cholesteatoma.
OS Homo sapiens.
Key Location/Qualifiers

FT protein 27..220
PN EP-398753-A.
PD 22-NOV-1990.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PA (CHIL-) CHILDRENS HOSPITAL OF LA.
PI Langley KE, Boone TC, Declerck YA;
DR WPI; 90-350481/47.
DR N-PSDB; Q06584.
PT New metalloproteinase inhibitor polypeptide(s) - and DNA
PT encoding them, for treatment of tumour cell dissemination and
PT rheumatoid arthritis
PS Claim 12, Fig 2, 63pp; English.
CC The product has therapeutic use in inhibiting tumour dissemination
CC during chemotherapy and radiation therapy, impugned bone marrow cell
CC harvesting etc. The inhibitor may also be useful in encapsulating
CC tumours aiding clean excision, and in treatment of emphysema, Paget's
CC disease, osteoporosis, scleroderma and bedsores.
CC The gene product also has application in autoimmune disorders eg.
CC rheumatoid arthritis and multiple sclerosis.
CC See also Q06583.
SQ Sequence 220 AA.

Query Match 100.0%; Score 1643; DB 2; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.41e-169;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 mgsaartlrlalqlllallrlpadacscspvhpqgafcnadvirakavsekevdsnd 60
|||||
1 mgsaartlrlalqlllallrlpadacscspvhpqgafcnadvirakavsekevdsnd 60
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefitytapsavcgsyldvggkkeyllagkaegd 120
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefitytapsavcgsyldvggkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220
QY 181 knlnghqakffacikrdsdcawyrqapppkgefldedp 220

RESULT 4
ID R62768 standard; Protein: 220 AA.
AC R62768;
DT 13-JUL-1995 (first entry)
DE Bovine metalloproteinase inhibitor
KW Metalloproteinase inhibitor; tumour cell dissemination;
KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
KW emphysema; osteoporosis; MI gene disorders.
OS Bos taurus.
Key Location/Qualifiers
peptide 1..26
/label= sig_peptide

PN EP-623676-A.
PD 09-NOV-1994.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PA (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI Boone TC, Declerck YA, Langley KE;
DR WPI; 94-343309/43.
DR N-PSDB; Q73087.
PT New metalloproteinase inhibitor, analogues and DNA - for
PT treating tumour cell dissemination, rheumatoid arthritis and for
PT large-scale recombinant inhibitor prodn.
CC Claim 12; Fig 1; 65pp; English.
CC 073087 encodes R62768 bovine metalloproteinase inhibitor (MI), it

OY 123 htlcfdltvwdltstlgtkkslnhrygmgecklttrcpmipcytsspdeclmndwvtekn 182
 DB 174 ypgyqskhyaclrqkgygswyrgwappdkslnatdp 211
 OY 183 lngdqakftaclkrdsqscawyrgaappkqefldiedp 220

RESULT 15

ID R65014 standard; Protein: 206 AA.

AC R65014;

DT 24-OCT-1995 (first entry)

DE Human tissue inhibitor of metalloproteinase (TIMP-3).

KW Tissue inhibitor of metalloproteinase; diagnostic; therapeutic;
prophylaxis.

OS Homo sapiens.

PN W09505478-A.

PD 23-FEB-1995.

PF 12-AUG-1994; 009188.

12-AUG-1993; US-105263.

13-DEC-1993; US-167463.

(RECC) UNIV CALIFORNIA.

PI Hawkes SP, Krishnam NS, Yang T;

DR WPI; 95-09675/13.

DR N-PsDB; Q82747.

PT New human tissue inhibitor of metallo:proteinase-3 - used to
develop prods. for diagnosis, therapy or prophylaxis of

PT conditions with unwanted matrix metallo:proteinase activity.

PS Disclosure: Fig 11: 87pp. English.

CC Human TIMP-3 can be used for the diagnosis, therapy or

CC prophylaxis of conditions characterized by excess or unwanted

CC matrix metalloproteinase activity, e.g. neoplasias, tumor

CC metastasis, inflammatory disorders such as rheumatoid arthritis,

CC ulcerations, reaction to infection, periodontal disease or

CC osteoporosis. It can also be used in drug screening/design.

SQ Sequence 206 AA;

Query Match 41.8%; Score 687; DB 13; Length 206;

Best Local Similarity 43.9%; Pred. No. 5,83e-62;

Matches 93; Conservative 54; Mismatches 53; Indels 12; Gaps 10;

DB 3 gyllgswslgdwgaactspshpdaafcsndivirakvvgkklvkegp--fgt-l--v- 56
 OY 13 gylllla-tll-rpadacscspvhpqgafcnadvirakavsekevsgndlygnpikrlq 70
 DB 57 ytlkqmkmyrgftkmpbhvgyintasesloglklevn-kyqylltgrvy-dgkmytqlcn 114
 71 yeikqikmkfkg-pek-dieftlytapsavcgsldvgykkeyliagkaegdgkmhltlcd 128
 DB 115 fterwdqltsqrkqglnryhlgcncklksqyllpcftvtskneclwtmdlnsfygyqgs 174
 OY 129 flvpwclstltqkkslnhrygmgecklttrcpmipcytsspdeclmndwvteknlngha 188
 DB 175 khyacltrqkgygswyrgwappdkslnatdp 206
 OY 189 kftaclkrdsqscawyrgaappkqefldiedp 220

Search completed: Mon May 4 14:52:17 1998
 Job time : 26 secs.

(TM)


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#journal      J.J.; Partridge, N.C.
#title        Arch. Biochem. Biophys. (1994) 311:313-320
#accession    S45683
#molecule_type mRNA
#residues     1-220 #label COO
REFERENCE
#authors      Rosvlt, W.T.; McCourt, D.W.; Partridge, N.C.; Jeffrey, J.J.
#journal      Arch. Biochem. Biophys. (1992) 292:402-410
#title        Purification and sequence analysis of two rat tissue
               inhibitors of metalloproteinases.
#cross-references MIMD:92117648
#accession    S20325
#molecule_type protein
#residues     27-48 #label ROS
REFERENCE
#authors      Gibbons, K.L.; O'Grady, R.L.; Piper, A.A.
#journal      Submitted to the EMBL Data Library, June 1995
#title        Rat tissue inhibitor of metalloproteinases-2: cDNA cloning
               and sequence analysis.
#accession    S60160
#molecule_type mRNA
#residues     1-6,'S',8-20,'V',22-152,'E',154-220 #label GIB
#cross-references EMBL:L31884
GENETICS
#gene         TIMP-2
#function      regulation of extracellular matrix remodeling by inhibition
               of matrix metalloproteinases; TIMP-1 and TIMP-2 complex
               specifically with progelatinase B and progelatinase A,
               respectively, possibly controlling their activation; TIMP-1
               and TIMP-2 possess erythroid potentiating activity
               #superfamily metalloproteinase inhibitor
               erythropoiesis; extracellular matrix; metalloproteinase
               inhibitor; mitogen
FEATURE
#domain signal sequence #status predicted #label SIG\
1-26          #product metalloproteinase inhibitor 2 #status predicted
27-220        #label MAT\
27-98,29-127, #disulfide_bonds #status predicted
39-152,154-201, #length 220 #molecular_weight 24369 #checksum 6329
159-164,172-193
SUMMARY
Query Match      99.2%; Score 1630; DB 2; Length 220;
Best Local Similarity 98.2%; Pred. No. 0.00e+00;
Matches 216; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 1 MGAARTLRALGLLLATLTPADACSPVHPQAFQCNMDVIRARAVSEKEVDSND 60
Qy 1 mgsaaarclrlalglillatllrpacscspvhpqatcnadvliravsekevdsnd 60
Db 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120
Qy 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120
Qy 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120
Db 121 KMHITLCPFIYPMWDLSTOKRSLNHRROMGCKITRCPMIPCTISSPDECLMDWYTE 180
Qy 121 KMHITLCPFIYPMWDLSTOKRSLNHRROMGCKITRCPMIPCTISSPDECLMDWYTE 180
Qy 121 KMHITLCPFIYPMWDLSTOKRSLNHRROMGCKITRCPMIPCTISSPDECLMDWYTE 180
Db 181 KSINGHQAQKFAKIRSDGSCAMYGAAAPKQEFIDIEP 220
Qy 181 KSINGHQAQKFAKIRSDGSCAMYGAAAPKQEFIDIEP 220
Qy 181 KSINGHQAQKFAKIRSDGSCAMYGAAAPKQEFIDIEP 220
RESULT
ENTRY      4      JH0683      #type complete
TITLE      metalloproteinase inhibitor 2 precursor - mouseALTERNATE_NAMES
ORGANISM   #formal_name Mus musculus #common_name house mouse
DATE       30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change

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#accessions   08-Sep-1997
#journal      JH0683; JCI234; S18428; S15987; S26189
#authors      JH0683
#title        Shimizu, S.; Malik, K.; Sejima, H.; Kishi, J.; Hayakawa, T.;
               Koizumi, O.
#journal      Gene (1992) 114:291-292
#title        Cloning and sequencing of the cDNA encoding a mouse tissue
               inhibitor of metalloproteinase-2.
#cross-references MIMD:92290292
#accession    JH0683
#molecule_type mRNA
#residues     1-220 #label SHI
#cross-references EMBL:X62622; NID:954801; PID:954802
#experimental_source 3T3 fibroblast, strain Balb/c
REFERENCE
#authors      Leco, K.J.; Hayden, L.J.; Sharma, R.R.; Rocheleau, H.;
               Greenberg, A.H.; Edwards, D.R.
#journal      Gene (1992) 117:209-217
#title        Differential regulation of TIMP-1 and TIMP-2 mRNA expression
               in normal and Ha-ras-transformed murine fibroblasts.
#cross-references MIMD:92347695
#accession    JCI234
#molecule_type mRNA
#residues     1-11,'H',13-20,'L',22-194,'E',196-220 #label LEC
#cross-references GB:M93954; NID:9202053; PID:9202054
REFERENCE
#authors      Kishi, J.
#journal      Matrix (1991) 11:373
#title        Correction.
#cross-references MIMD:92244125
#accession    S18428
#molecule_type protein
#residues     27-46,'H',48,50-53,'VD',56,'DY' #label KIS
REFERENCE
#authors      Kishi, J.I.; Ogawa, K.; Yamamoto, S.; Hayakawa, T.
#journal      Matrix (1991) 11:10-16
#title        Purification and characterization of a new tissue inhibitor
               of metalloproteinases (TIMP-2) from mouse colon 26 tumor
               cells.
#cross-references MIMD:91226375
#accession    S15987
#molecule_type protein
#residues     27-46,'HX',50-52,'LX',55-56,'DX',60,'X',62 #label KIZ
#note         this sequence has been revised in reference S18428
FUNCTION
#description  regulation of extracellular matrix remodeling by inhibition
               of matrix metalloproteinases; TIMP-1 and TIMP-2 complex
               specifically with progelatinase B and progelatinase A,
               respectively, possibly controlling their activation; TIMP-1
               and TIMP-2 possess erythroid potentiating activity
               #superfamily metalloproteinase inhibitor
               erythropoiesis; extracellular matrix; metalloproteinase
               inhibitor; mitogen
CLASSIFICATION
KEYWORDS
FEATURE
#domain signal sequence #status predicted #label SIG\
1-26          #product metalloproteinase inhibitor 2 #status
27-220        #label MAT\
27-98,29-127, #disulfide_bonds #status predicted
39-152,154-201, #length 220 #molecular_weight 24328 #checksum 6045
159-164,172-193
SUMMARY
Query Match      98.6%; Score 1620; DB 2; Length 220;
Best Local Similarity 97.3%; Pred. No. 0.00e+00;
Matches 214; Conservative 5; Mismatches 1; Indels 0; Gaps 0;
Db 1 MGAARSLRLALGLLLASTVPRPADACSPVHPQAFQCNMDVIRARAVSEKEVDSND 60
Qy 1 mgsaaarclrlalglillatllrpacscspvhpqatcnadvliravsekevdsnd 60
Db 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120
Qy 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120
Qy 61 IYGNPIKRIQYEIKOIKKFKGPKDIEFIYTPASSAVGVSIDVGCKEYLIAGRAEDG 120

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Db	Qy	Db	Qy
121	KMHTLIDELIYPMOTLSTLSTOKKSNHNHYOMGCCBEKTRCPHPIPIYISSPEDCLMADWYTE 180	181	KSTINGHOAKPFACIKRSDSCAWYRGAAPKPEQTEFLIEDP 220
121	kmhtlidelipympotlststokksnhnhyomgccbe ktrcp hpi piy is sp ed cl m ad w y t e 180	181	kstinghoakpfacikr s d s c a w y r g a a p k p e q t e f l i e d p 220
121	kmhtlidelipympotlststokksnhnhyomgccbe ktrcp hpi piy is sp ed cl m ad w y t e 180	181	kstinghoakpfacikr s d s c a w y r g a a p k p e q t e f l i e d p 220

RESULT	5	
ENTRY	A35996	#type complete

LINE	ORGANISM	DATE	metalloproteinase inhibitor 2 precursor - bovineALTERNATE_NAMES	collag
			(TIMP-2)	
	#format_name Bos primigenius taurus	#common_name cattle		
	16-Nov-1990	#sequence_revision 12-Apr-1996	#text_change	

ACCESSIONS	REFERENCE
A35996; A34468; A25322; S28151	
A35996	

#authors
 Boone, T.C.; Johnson, M.J.; De Clerck, Y.A.; Langley, K.E.
 #journal
 Proc. Natl. Acad. Sci. U.S.A. (1990) 87:2800-2804
 #title
 cDNA cloning and expression of a metalloproteinase inhibitor
 related to tissue inhibitor of metalloproteinases.
 #cross-references MIMD:90207265
 #accession A35996

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##residues      1-220 #label BOO
##cross-references GB:M32303; NID:g163341; PID:g163342
##experimental_source aortic endothelial CDNA library
REFERENCE
A34468
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#journal	J. Biol. Chem. (1989) 264:17445-17453
#title	Purification and characterization of two related but distinct metalloproteinase inhibitors secreted by bovine aortic endothelial cells.
#cross-references	MDID:90008914
#accession	A34468

#residues	27-71	#label DEC
#experimental	source culture medium of aortic endothelial cells	
REFERENCE	A25322	
#authors	Murray, J.B.; Allison, K.; Sudhalter, J.; Langer, R.	
#journal	J Biol Chem	(1986) 261:4153-4159
#title	Purification and partial amino acid sequence of a bovine cartilage-derived collagenase inhibitor.	
#cross-references	MUID:86140235	
#accession	A25322	

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#experimental_source cartilage
REFERENCE S28151
MUR
+VALUES
Z/41, 'C', 43-55, 'EX', 58-59, 'X', 61-66, 'XS', 69-71 ##label

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authors	Declerck, Y.A.; Yean, T.D.; Bee, Y.; Tomach, J.M.; Langley, K.E.
#journal	Biochem. J. (1993) 289:65-69
#title	Characterization of the functional domain of tissue inhibitor of metalloproteinases-2 (TIMP-2).
#contents	annotation; functional domain
#function	

#description
regulation of extracellular matrix remodeling by inhibition of matrix metalloproteinases; TIMP-1 and TIMP-2 complex specifically with progelatinase B and progelatinase A, respectively, possibly controlling their activation; TIMP-2 possesses erythroid potentiating activity
#superfamily metalloproteinase inhibitor
#keywords
erythropoiesis; extracellular matrix; metalloproteinase inhibitor; mitogen

```
1-26 #domain signal sequence #status predicted #label SIG\
27-220 #product metalloproteinase inhibitor 2 #status predicted
#label MAT\
```

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27-98,29-137,      #disulfide bonds #status predicted
39-152,154-201,
159-164,172-193
SUMMARY             #length 220 #molecular-weight 24355 #checksum 33455

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Query Match	94.3%	Score 1550;	DB 1;	Length 220;
Best Local Similarity	91.8%;	Pred. No. 0.00e+00;		
Matches 202;	Conservative 12;	Mismatches 6;	Indels 0;	Gaps 0;

Accession	Protein	Length (aa)	Score	E-value
D6	1 MGAARSLPLAFCLLLIGLLPRADACSSPVYHQRAACNADIIYIRAKVANKKEVDSGD	61	10.0	1.0e-10
QY	1 mgaarstlrllalilacilipadacscspvhpqafcinadvllrakaveevdsngd	61	10.0	1.0e-10
D6	61 IYGNPIRIQDIETKQIKMKRSGDNDTEFTVADALVNCSTETVCCGPEPVYVAVLVNAG	121	10.0	1.0e-10

[illegible]

```

D0      121 NMHLLTCDFIVPMDLTSATQKSLNHERYQMGCECKITRCPMIPCISSPDECLMMDVTE 160
      :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Oy      121 kmhltcdffvwdclsttqgkkslnhrmqgceckltcrpmipcyisspdeclmmdvte 160

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Dd	181	KNINGHQAKFFACIKRSDGSCAWYGAAPRKQEFLLIEDP	220
Qy	181	knngqhakffacikrsdgscaawygaaprkqeflliedp	220

RESULT	6	
ENTRY	S38624	#type fragment

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ALTERNATE_NAMES  Timp-2; tissue inhibitor of metalloproteinases 2
ORGANISM          #Homo_sapiens longicaudatus #common_name
                  #long-tailed hamster
DATE.             06-Jan-1995 #sequence_revision 12-Apr-1996 #text_change
                  05-Sep-1997

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ACCESSIONS	S38624
REFERENCE	S38624
#authors	Suzuki, Y.
#submission	submitted to the EMBL Data Library, November 1993
#accession	S38624

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##molecule_type mRNA
##residues 1-196 ##label SUZ
##cross-references EMBL:X75924; NID:g414876; PID:g414877
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DESCRIPTION	regulation of extracellular matrix remodeling by inhibition of matrix metalloproteinases; TIMP-1 and TIMP-2 complex specifically with progelatinase B and progelatinase A, respectively, possibly controlling their activation; TIMP-1 and TIMP-2 possess erythroid potentiating activity
CLASSIFICATION	superfamily metalloproteinase inhibitor
KEYWORDS	erythropoiesis; extracellular matrix; metalloproteinase inhibitor; mitogen
REFERENCE	

```

3-196      #product metalloproteinase inhibitor 2 #status predicted
           #label MAT\
3-74, 5-103, 15-128,
130-177, 135-140,
148-169    #disulfide_bonds #status predicted
SUMMARY    #length 196 #checksum 7766

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Query Match	89.28;	Score 1466;	DB 1;	Length 196;
Best Local Similarity	99.08;	Pred. No. 1.14e-294;		
Matches 193;	Conservative 2;	Mismatches 0;	Indels 0;	Gaps 0;

ACGSSPVHPQOAFCMADVITRATAVSKEKVDSGNDIYGNPIRIQIYEIKOLIMFEKGPDKD
acscspvhpqgaefcmadvitratavskekvdsgndiynpnirriyekiolkimfegpkd
TEFTVTBDSNVCICETINUCGVEVITATPQQMNVKPKLIRKIVKQKLMFKFPEKD

122 HRYMGCECKITRCMPHICPISSEPDCLMMDVYTRKSLNGDAFFACIKRSDSCAMWR 161

|||||
QY 146 hrygmgecklttrcmipcyisspdeclwmdwvteknlnghakfacktsdgscaayr 205
Db 182 GAAPPKQEFIDIEDP 196
QY 206 gaappkgefildedp 220
RESULT 7 S45317 #type complete
ENTRY
TITLE metalloproteinase inhibitor 3 precursor - humanALTERNATE_NAMES mig-5 F
ORGANISM 3
DATE #formal_name Homo sapiens #common_name man
06-Jan-1995 #sequence_revision 12-Apr-1996 #text_change
05-Sep-1997
ACCESSIONS S45317; S59515; S53870; I38023; A49614; C56937; I53025;
S47041
REFERENCE S45317
#authors Urita, J.A.; Ferrando, A.A.; Velasco, G.; Fretje, J.M.P.;
Lopez-Otin, C.
#journal Cancer Res. (1994) 54:2091-2094
#title Structure and expression in breast tumors of human TIMP-3, a
new member of the metalloproteinase inhibitor family.
#accession S45317
#molecule_type mRNA
#residues 1-211 #label URI
#cross-references EMBL:X76227; NID:g495251; PID:g495252
#experimental_source breast tumor CDNA library
REFERENCE S59515
#authors Silbiger, S.M.; Jacobsen, V.L.; Cupples, R.L.; Koski, R.A.
#journal Gene (1994) 141:293-297
#title Cloning of cDNAs encoding human TIMP-3, a novel member of the
tissue inhibitor of metalloproteinase family.
#accession S59515
#status preliminary
#molecule_type mRNA
#residues 1-211 #label STL
#cross-references EMBL:002571; NID:g472309; PID:g472310
REFERENCE S53870
#authors Kishanani, N.S.; Staskus, P.W.; Yang, T.T.; Mastarz, F.R.;
Hawkes, S.P.
#journal Matrix Biol. (1994) 14:479-488
#title Identification and characterization of human tissue inhibitor
of metalloproteinase-3 and detection of three additional
metalloproteinase inhibitor activities in extracellular
matrix.
#accession S53870
#molecule_type protein
#residues 'X',25,'XX',28,'X',30-35,'X',37,'X',39-41 #label KIS
REFERENCE I38023
#authors Wick, M.; Buerger, C.; Brueselbach, S.; Lucibello, F.C.;
Mueller, R.
#journal J. Biol. Chem. (1994) 269:18953-18960
#title A novel member of human tissue inhibitor of
metalloproteinases (TIMP) gene family is regulated during
G1 progression, mitogenic stimulation, differentiation, and
senescence.
#cross-references MUID:94308155
#accession I38023
#molecule_type mRNA
#residues 1-15,'W',17,'T',20-21,'PR',24-201,'X',203-211 #label
RES
#cross-references EMBL:Z30183; NID:g520931; PID:g520932
#experimental_source fibroblast cell line WI-38
REFERENCE A49614
#authors Apte, S.S.; Mattel, M.G.; Olsen, B.R.
#journal Genomics (1994) 19:86-90
#title Cloning of the cDNA encoding human tissue inhibitor of
metalloproteinases-3 (TIMP-3) and mapping of the TIMP3 gene
to chromosome 22.
#accession A49614
#molecule_type mRNA

##residues 14-20,'R',23-211 #label APT
##cross-references GB:U15078; NID:g407034; PID:g407035
##experimental_source placenta CDNA library
REFERENCE A56937
#authors Apte, S.S.; Olsen, B.R.; Murphy, G.
#journal J. Biol. Chem. (1995) 270:14313-14318
#title The gene structure of tissue inhibitor of metalloproteinases
(TIMP)-3 and its inhibitory activities define the distinct
TIMP gene family.
#accession C56937
#molecule_type protein
#residues 'X',25,'X',27-35,'X',37 #label AP2
REFERENCE I53025
#authors Wilde, C.G.; Hawkins, P.R.; Coleman, R.T.; Levine, W.B.;
Deleage, A.M.; Okamoto, P.M.; Ito, L.Y.; Scott, R.W.;
Seilhamer, J.J.
#journal DNA Cell Biol. (1994) 13:711-718
#title Cloning and characterization of human tissue inhibitor of
metalloproteinases-3.
#cross-references MUID:95290091
#accession I53025
#status translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-211 #label RE2
#cross-references GB:S78453; NID:g998825; PID:g998826
GENETICS
#gene GDB:TIMP3
#map_position 22q12.1-22q13.2
FUNCTION
#description regulation of extracellular matrix remodeling by inhibition
of matrix metalloproteinases
#note transcription induced by cytokines, tumor promoters, and
anti-inflammatory agents
#note TIMP-1 and TIMP-3 have distinct but overlapping
tissue-specific expression patterns
#superfamily metalloproteinase inhibitor
#extracellular matrix; metalloproteinase inhibitor
CLASSIFICATION
KEYWORDS #domain signal sequence #status predicted #label SIG\
1-23 #product metalloproteinase inhibitor 3 #status
24-211 experimental #label MAT\
24-91,26-118,
36-143,145-192,
150-155,163-184
SUMMARY #length 211 #molecular_weight 24145 #checksum 4550
Query Match 42.3%; Score 695; DB 1; Length 211;
Best Local Similarity 43.6%; Pred. No. 5,016-122;
Matches 95; Conservative 56; Mismatches 55; Indels 12; Gaps 10;
Db 2 TPWGLVILGWSWSIGDGAECTSPSPHODAFQNSDVIIRAKVVGKRLVEGP-FGT 59
QY 7 lrlalglilla-lll-tpadaccspvhpqafnadavlrakvsekevsqndiygn 64
Db 60 -L--V-YTIKMKWRTGRTKMPHOYITFEASESICGLKEVYR-KYQTLTGRTV-DGRM 113
QY 65 plkrlyeikqikmfky-pek-dlefiytlapsavcysldvgkykeyliagkaegdkm 122
Db 114 YTGICNFERBDQTLISQKGLNRYHLCGCKIKSCYILPEFVSKNECLMTDLNNG 173
QY 123 htlcditvpdclstlqkshlnhygmgecklttrcmipcyisspdeclwmdwvtekn 182
Db 174 YPGYOSKHAYACIRKGGYCSWYRGWAPDKSITNATDP 211
QY 183 lngnqakfacktsdgscaayrgaappkgefildedp 220
RESULT 8 A53532 #type complete
ENTRY
TITLE metalloproteinase inhibitor 3 precursor - mouseALTERNATE_NAMES TIMP
ORGANISM #formal_name Mus musculus #common_name house mouse

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DATE
27-Jun-1994 #sequence_revision 12-Apr-1996 #text_change
05-Sep-1997

ACCESSIONS
A53532; S43053; A56937; B56937; I53108; S43052
A53532

AUTHORS
#authors
#journal
#title

J. Biol. Chem. (1994) 269:9352-9360
Tissue inhibitor of metalloproteinases-3 (TIMP-3) is an
extracellular matrix-associated protein with a distinctive
pattern of expression in mouse cells and tissues.
D. R.
Lecoq, K. J.; Khokha, R.; Pavloff, N.; Hawkes, S. P.; Edwards,
J. R.

#accession
#molecule_type mRNA
#residues 1-211 ##label LEC
#cross-references GB:U27424; NID:G433881; PID:G433882
#note not glycosylated when expressed by monkey kidney COS-1
cells

REFERENCE
S43053
Sun, Y.; Hegamyer, G.; Colburn, N. H.
Cancer Res. (1994) 54:1139-1144
Molecular cloning of five messenger RNAs differentially
expressed in preneoplastic or neoplastic JB6 mouse
epidermal cells: one is homologous to human tissue
inhibitor of metalloproteinases-3.
S43053

#accession
#status nucleic acid sequence not shown
#molecule_type mRNA
#residues 14-211 ##label SU2
#cross-references EMBL:Z30970
A56937

REFERENCE
A56937
Apte, S. S.; Olsen, B. R.; Murphy, G.
J. Biol. Chem. (1995) 270:14313-14318
The gene structure of tissue inhibitor of metalloproteinases
(TIMP)-3 and its inhibitory activities define the distinct
TIMP gene family.

#accession
#molecule_type mRNA: DNA
#residues 1-211 ##label APT
#cross-references GB:U26434; NID:G438810; PID:G438811; GB:U26433;
GB:U26434; GB:U26435; GB:U26436; GB:U26437;
NID:G1167533; PID:G1167534

REFERENCE
B56937
Apte, S. S.; Hayashi, K.; Seldin, M. F.; Mattel, M. G.; Hayashi,
M.; Olsen, B. R.
Dev. Dyn. (1994) 200:177-197
Gene encoding a novel murine tissue inhibitor of
metalloproteinases (TIMP), TIMP-3, is expressed in
developing mouse epichella, cartilage, and muscle, and is
located on mouse chromosome 10.

#cross-references MIMD:95036582

#accession
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-211 ##label RES
#cross-references GB:U19622; NID:G438810; PID:G438811.

GENETICS
#gene timp3
#map_position 10
#introns 41/1; 68/3; 106/1; 146/3

FUNCTION
#description regulation of extracellular matrix remodeling by inhibition
of matrix metalloproteinases
transcription induced by cytokines, tumor promoters, and
anti-inflammatory agents
TIMP-1 and TIMP-3 have distinct but overlapping
tissue-specific expression patterns
#superfamily metalloproteinase inhibitor
extracellular matrix; metalloproteinase inhibitor

CLASSIFICATION
KEYWORDS
FEATURE
#domain signal sequence #status predicted #label SIG
1-23

```

24-211

#product metalloproteinase inhibitor 3 #status experimental #label MAT\

24-91,26-118
36-143,145-192,
150-155,163-184

SUMMARY #length 211 #molecular-weight 24182 #checksum 4940

Query Match 41.8%; Score 686; DB 1; Length 211;
Best Local Similarity 43.1%; Pred. No. 4,72e-120;
Matches 94; Conservative 56; Mismatches 56; Indels 12; Gaps 10;

Dn 2 TPMLGIYVLTSCMSLGHMAEACTCSPSHPDAFCNSDIYIAKAYGKKLYEGP--FGT 59
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::
7 LIRLAGIILIIA-L-Ipadacscspvhpqafcnadvirakavsekevdsyndiygn 64

Dn 60 -L-V-YTIKIKRGRFSGMPHOVIYHTEASESLGLLEVN-KYOYLIGRRV-BERM 113
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::
Qy 65 plkrlygelkqtkmfkg-pekdieflytapsarvcyslvdgqkeyllagkaedgkm 122

Dn 114 YVGLCNFEWRMDHLTLRSRGKLNYRYHLCNCNKISCYLLPCFVSKNECLMTDLSNFG 173
||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::
Qy 123 hltcdflvpwddlstqtqsklnhygmgeckitrcpmipoyispspeclwmddvvteln 182

Dn 174 YPGYSKHACIRKNGGICSWTRGNAPPDKSISNATDP 211
|-:-|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::
Qy 183 lnghqakifackirkdsgcawyrgaapkgelfiedp 220

RESULT 9 A43429 #type complete

ENTRY

TITLE metalloproteinase inhibitor 3 precursor - chickenALTERNATE_NAMES 211

ORGANISM #formal name Gallus gallus #common name chicken

DATE 04-Mar-1993 #sequence_revision 12-Apr-1996 #text_change 05-Sep-1997

ACCESIONS A43429; A39043

REFERENCE Pavloff, N.; Staskus, P.W.; Kishanani, N.S.; Hawkes, S.P.
J. Biol. Chem. (1992) 267:17321-17326
#journal A new inhibitor of metalloproteinases from chicken: CHIMP-3.
#title A third member of the TIMP family.

#cross-references MUID:92381050

#accession A43429

#molecule-type mRNA

#residues 1-212 ##label PAY

#cross-references GB:M94531; MID:9211901; PID:9211902

#experimental_source ten-day old embryo CDNA library

#note Sequence extracted from NCBI backbone (NCBIN:111960, NCBIP:111961)

A39043

REFERENCE Staskus, P.W.; Masiarz, F.R.; Pallanck, L.J.; Hawkes, S.P.
J. Biol. Chem. (1991) 266:449-454
#journal The 21-kDa protein is a transformation-sensitive metalloproteinase inhibitor of chicken fibroblasts.
#cross-references MUID:91093162

#accession A39043

#molecule-type protein

#residues 26-51,'1',53 ##label STA

#experimental_source cultured embryonic fibroblasts infected with Rous sarcoma virus

#note contains disulfide bonds; not glycosylated; has inhibitory activity

FUNCTION

#description regulation of extracellular matrix remodeling by inhibition of matrix metalloproteinases

#note transcription induced by cytokines, tumor promoters, and anti-inflammatory agents

#note TIMP-1 and TIMP-3 have distinct but overlapping tissue-specific expression patterns

CLASSIFICATION #superfamily metalloproteinase inhibitor

KEYWORDS extracellular matrix; glycoprotein; metalloproteinase inhibitor


```

FEATURE
1-24      #domain signal sequence #status predicted #label SIG
25-212    #product metalloproteinase inhibitor 3 #status
          experimental #label MATV
          25-92,27-119,
          37-144,146-193,
          151-156,164-185
          208

SUMMARY
#length 212 #molecular-weight 24504 #checksum 6267

Query Match      41.8%; Score 686; DB 1; Length 212;
Best Local Similarity 45.2%; Pred. No. 4,72e-150;
Matches 90; Conservative 49; Mismatches 50; Indels 10; Gaps 8;

Db 22 AEAQCPPIHQDAFCNSDIYIRAKVGKLMKGDP--FGT-M-R--YTVMKKMYRFO 75
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 24 adacscspvhpqgafcnadvirakavsekevsgndiygnpkriqykxikmfk-p 82
   :|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
   76 IMPHQQVITYTESSESIGVKLEVN-KYYLLTGRRY-EGKYVTGICMNYEKMDRTLSOL 133
   :|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
   83 ek-deliyltapsvescvslavgkkeyllagkaegqkmiltcdiltpdclstcqk 141
   :|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 134 KGLNRYHLGGCGCKRIKPYLYLPCEATSKNECIWTDMLSNFSGHOAHXACTORVEGYC 193
   |:|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 142 kslnhrygmgecektlrpmalpcylispedclmwdvvecklnhgafkfackkrsgdc 201
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 194 SWRGMAPPPDKTIINADP 212
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 202 awyrqaappkgelfidcqp 220
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

RESULT 10      Jc4630      #type complete
ENTRY
TITLE           metalloproteinase tissue inhibitor 3 - ratALTERNATE_NAMES TIMP-3; tiss
ORGANISM        metalloproteinase tissue inhibitor 3 #common_name Norway rat
DATE            10-Apr-1996 #sequence_revision 24-May-1996 #text_change
                08-Sep-1997
ACCESSIONS
REFERENCE       JC4630
#authors        Wu, I.; Moses, M.A.
#journal         Gene (1996) 168:243-246
#title          Cloning and expression of the cDNA encoding rat tissue
                inhibitor of metalloproteinase 3 (TIMP-3).
                Inhibitor of metalloproteinase 3 (TIMP-3).
#accession      JC4630
                #molecule_type mRNA
                ##residues     1-211 ##label WT1
##cross-references GB:U27201; NID:g971205; PID:g971206
##experimental_source chondrosarcoma
COMMENT         This protein is a matrix-bound glycoprotein, that is a member of
the tissue inhibitor of metalloproteinase family and
down-regulates matrix metalloproteinase activity.

GENETICS
#gene           TIMP-3
CLASSIFICATION  #superfamily metalloproteinase inhibitor
KEYWORDS        extracellular matrix; glycoprotein; metalloproteinase
                inhibitor
FEATURE
1-23         #domain signal sequence #status predicted #label SIG\
24-211       #product metalloproteinase tissue inhibitor 3 #status
                predicted #label MATV\
207          #binding_site carbohydrate (Asn) (covalent) #status
                predicted
SUMMARY
#length 211 #molecular-weight 24226 #checksum 5198

Query Match      41.4%; Score 680; DB 2; Length 211;
Best Local Similarity 42.7%; Pred. No. 9,74e-119;
Matches 93; Conservative 56; Mismatches 57; Indels 12; Gaps 10;

Db 2 TPMLGIVLVLTSCMSJCHMTACTGSPSHPODAFNSDIYIRAKYGKRLKEGP--FGT 59
   |::|:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy 7  ttrialglilla-tl-lrpadcscspvhpqgafcnadvirakavsekevsgndiygn 64

```

Db	60	-L--V--YTIOMKAFESFQSPHVOYTHFPAESLGLKLEVN-KYQYLLTGHVY-EGKM	113
Qy	65	pkirigvelqiklmfgy-pek-dtefflytapsavcgvslidygkkeyllagaaegdygm	122
Db	114	YTGICNFVERMDHLTFSORGLNRYHLGCONCKIKSCYIYPCFVTSKRECLWMTMSNFG	173
Qy	123	hticodfiypwdltstqtkkslnhrygmgecklttrcpmipcyisspdeclmndwvtekn	182
Db	174	YFGQSKHYACINRGKGYCSWYGRGMAPPPDKSINANDP	211
Qy	183	lnghqakfiacikrdsqscawyrqaappkqefldedp	220
RESULT ENTRY	11	JC4303	#type complete
TITLE			matrix metalloproteinase-1 tissue inhibitor - baboonORGANISM
DATE			16-Nov-1995 #sequence_revision 08-Feb-1996 #text_change
ACCESSIONS			08-Sep-1997
REFERENCE			JC4303
#authors			Forough, R.; Nikkarl, S.T.; Hasenstab, D.; Lea, H.; Clowes, A.W.
#journal			Gene (1995) 163:267-271
#title			Cloning and characterization of a cDNA encoding the baboon tissue inhibitor of matrix metalloproteinase-1 (TIMP-1).
#accession			JC4303
##molecule_type			mRNA
##residues			1-207 ##label FOR
##cross-references			GB:LJ7295; NID:9561545; PID:9561546
##experimental_source			smooth muscle cell
COMMENT			This protein, a member of the tissue inhibitor of matrix metalloproteinase family, is a secreted glycoprotein which functions through formation of a 1:1 complex with matrix metalloproteinase and influences the proteinase activity. It has a role as a physiological molecule for limiting vascular smooth muscle cell proliferation and migration after arterial injury.
GENETICS			
#gene			timp-1
CLASSIFICATION			superfamily metalloproteinase inhibitor
KEYWORDS			extracellular matrix; glycoprotein; metalloproteinase inhibitor
FEATURE			
53,101			#binding_site carbohydrate (Asn) (covalent) #status predicted
SUMMARY			#length 207 #molecular_weight 22213 #checksum 9817
Query Match			31.7%; Score 521; DB 2; Length 207;
Best Local Similarity			41.1%; Pred. No. 3,30e-84;
Matches			81; Conservative 39; Mismatches 70; Indels 7; Gaps 7;
Db	7	LASGLLILMIASRACVCPHPHQAFCNSDVIYIAKFGTFEVNQT-LYQRYEIKM	65
Qy	10	lalglillatllradccscspvhpqafcnadvllakavseksyndliygn-pikr	68
Db	66	TK-MKGFQAL-GPAADIRFVYTPAMESVCGYFHRSHNRSEEFIAKLAQ-DGLHLITTC	122
Qy	69	lyqelkqikmktgpekdtefflytapsavcgvslidygkkey-yliaakaaegdygmhtlc	127
Db	123	SFVAPWNSLSIAQRGRTKTYTVCCECTVPPCLISIPCKLQSGTHCIMTDOLGSEKGF	182
Qy	128	dfiypwdltstqtkkslnhrygmge-ciktrcpmipcyisspdeclmndwvtekn	186
Db	183	QSRHLACPRRPGCTW	199
Qy	187	qakfiacikrdsqscaw	203
RESULT ENTRY	12	ZYHOEP	#type complete
TITLE			metalloproteinase tissue inhibitor 1 precursor - humanALTERNATE_NAME

ORGANISM #inhibitor: tissue inhibitor of metalloproteinases (TIMP-1)
 DATE #formal_name Homo sapiens #common_name man
 28-May-1986 #sequence_revision 28-May-1986 #text_change
 20-Mar-1988

ACCESSIONS A93372: A93363: A23534: A20595: A35826: A48417: S20318:
 S15872: I52912: S66461: A01269

REFERENCE
 #authors Dochterly, A.J.P.; Lyons, A.; Smith, B.J.; Wright, E.M.;
 Stephens, P.E.; Harris, T.J.R.; Murphy, G.; Reynolds, J.J.
 #journal Nature (1985) 318:66-69
 #title Sequence of human tissue inhibitor of metalloproteinases and
 its identity to erythroid-potentiating activity.
 #cross-references M01D:86040463
 #accession A93372
 #molecule_type mRNA
 #residues 1-207 ##label DOC
 #cross-references GB:X03124: NID:937182: PID:937183

REFERENCE
 #authors Gasson, J.C.; Golde, D.W.; Kaufman, S.E.; Westbrock, C.A.;
 Hewick, R.M.; Kaufman, R.J.; Wong, G.G.; Temple, P.A.;
 Leary, A.C.; Brown, E.L.; Orr, E.C.; Clark, S.C.
 #journal Nature (1985) 315:768-771
 #title Molecular characterization and expression of the gene
 encoding human erythroid-potentiating activity.
 #cross-references M01D:85240567
 #accession A93363
 #molecule_type mRNA
 #residues 1-207 ##label GAS

REFERENCE
 #authors Carnichaël, D.F.; Sommer, A.; Thompson, R.C.; Anderson, D.C.;
 Smith, C.G.; Welgus, H.G.; Stricklin, G.P.
 #journal Proc. Natl. Acad. Sci. U.S.A. (1986) 83:2407-2411
 #title Primary structure and cDNA cloning of human fibroblast
 collagenase inhibitor.
 #cross-references M01D:86205964
 #accession A23534
 #molecule_type mRNA
 #residues 1-207 ##label CAR
 #cross-references GB:M12670: NID:9182482: PID:9182483
 ##note parts of this sequence were confirmed by protein
 sequencing

REFERENCE
 ##note A20595
 #authors Stricklin, G.P.; Welgus, H.G.
 #journal J. Biol. Chem. (1983) 258:12252-12258
 #title Human skin fibroblast collagenase inhibitor.
 #cross-references M01D:84032401
 #accession A20595
 #molecule_type protein
 ##residues 24-44,'L',46 ##label STR
 ##note six disulfide bonds are present

REFERENCE
 #authors Rapp, G.; Freudenstein, J.; Klaidiny, J.; Mucha, J.; Wempe,
 F.; Zimmer, M.; Scheit, K.H.
 #journal DNA Cell Biol. (1990) 9:479-485
 #title Characterization of three abundant mRNAs from human ovarian
 granulosa cells.
 #cross-references M01D:91025550
 #accession A35826
 #molecule_type mRNA
 #residues 1-207 ##label RAP
 #cross-references GB:M8188

REFERENCE
 #authors Van Raust, M.; Norga, K.; Masure, S.; Proost, P.;
 Vandekerckhove, F.; Auwerx, J.; Van Damme, J.; Opdenakker,
 G.
 #journal Cytokine (1991) 3:231-239
 #title The cytokine-protease connection: identification of a 96-kD
 TIMP-1 gelatinase and regulation by interleukin-1 and
 cytokine inducers.
 #cross-references M01D:91355647
 #accession A48417
 #molecule_type protein

##residues 'X',25,'X',27-35,'X',37-52 ##label VAN
 ##experimental_source monocytic cell line TIMP-1
 ##note sequence modified after extraction from NCBI backbone
 ##note sequence incorrectly identified as 96k gelatinase

REFERENCE
 #authors Osthus, A.; Knauper, V.; Oberhoff, R.; Reineke, H.;
 Tschesche, H.
 #journal FEBS Lett. (1992) 296:16-20
 #title Isolation and characterization of tissue inhibitors of
 metalloproteinases (TIMP-1 and TIMP-2) from human
 rheumatoid synovial fluid.
 #cross-references M01D:92111776
 #accession S20318
 #molecule_type protein
 ##residues 'X',25,'X',27-35,'X',37-38 ##label OST
 ##experimental_source rheumatoid synovial fluid

REFERENCE
 #authors Opdenakker, G.; Masure, S.; Proost, P.; Billiau, A.; van
 Damme, J.
 #journal FEBS Lett. (1991) 284:73-78
 #title Natural human monocyte gelatinase and its inhibitor.
 #cross-references M01D:91285112
 #accession S15872
 #molecule_type protein
 ##residues 'X',25,'X',27-35,'X',37-42,'X',44,'X',46,'X',48-51
 ##label FEB
 ##experimental_source peripheral blood monocytes

REFERENCE
 #authors Williamson, R.A.; Marston, F.A.O.; Angel, S.; Koklitis, P.;
 Panico, M.; Morris, H.R.; Carne, A.F.; Smith, B.J.; Harris,
 T.J.R.; Freedman, R.B.
 #journal Biochem. J. (1990) 268:267-274
 #title Disulphide bond assignment in human tissue inhibitor of
 metalloproteinases (TIMP).
 #note annotation: disulfide bonds
 152912
 #contents Opbroek, A.; Kenney, M.C.; Brown, D.
 #authors Curr. Eye Res. (1993) 12:877-883
 #journal Characterization of a human corneal metalloproteinase
 #title inhibitor (TIMP-1).
 152912

REFERENCE
 #accession translated from GB/EMBL/DBJ
 ##status
 ##molecule_type mRNA
 ##residues 1-207 ##label RES
 #cross-references GB:S68252: NID:9545022

REFERENCE
 #authors Triebel, S.; Blaaser, J.; Gote, T.; Pelz, G.; Schueren, E.;
 Schmitt, M.; Tschesche, H.
 #journal Eur. J. Biochem. (1995) 231:714-719
 #title Evidence for the tissue inhibitor of metalloproteinases-1
 (TIMP-1) in human polymorphonuclear leukocytes.
 S66461

REFERENCE
 #accession
 ##molecule_type protein
 ##residues 24-38 ##label TRI
 ##experimental_source polymorphonuclear leukocytes
 #comment This protein, found in a variety of body fluids, complexes with
 metalloproteinases, irreversibly inactivating them. It also
 mediates erythropoiesis in vitro; but, unlike IL-3, it is
 species-specific, stimulating the growth and differentiation of
 only human and murine erythroid progenitors.
 The remarkable heat stability of this protein may be due to
 disulfide bond formation.

COMMENT The remarkable heat stability of this protein may be due to
 disulfide bond formation.

GENETICS
 #gene GDB:TIMP1; CIGI: TIMP
 #cross-references GDB:119615; OMIM:305370

CLASSIFICATION
 #map_position XP11.3-XP11.23
 #superfamily metalloproteinase inhibitor
 #keywords erythropoiesis; glycoprotein; metalloproteinase inhibitor;
 mitogen

FEATURE
 1-23 #domain signal sequence #status predicted #label SIG\N
 24-207 #product metalloproteinase inhibitor 1 #status
 experimental #label MAT\N

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(TM)

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MSrch_pp protein - protein database search, using Smith-Waterman algorithm
on: Mon May 4 14:51:04 1998; MasPar time 15.16 Seconds
610.953 Million cell updates/sec
ular output not generated.

Title: >R07955
Description: (1-220) from a-geneseq.pep
Perfect Score: 1643
Sequence: 1 mgsaartlialgljllatl.....cavyrgaappkgefildp 220

Scoring table: PAM 150
Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: splemb15
1:sp_fungi 2:sp_human 3:sp_invertebrate 4:sp_mammal
5:sp_mhc 6:sp_organelle 7:sp_phase 8:sp_plant
9:sp_bacteria 10:sp_rodent 11:sp_virus 12:sp_vertebrate
13:sp_unclassified

Statistics: Mean 43.550; Variance 66.095; scale 0.659

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	1466	89.2	196	10	060453	TISSUE INHIBITOR OF ME	0.00e+00
2	1313	79.9	220	12	042146	TISSUE INHIBITOR OF ME	0.00e+00
3	844	51.4	224	2	099727	TISSUE INHIBITOR OF ME	4.37e-190
4	474	28.8	207	4	002722	TISSUE INHIBITOR OF ME	3.98e-91
5	448	27.3	176	10	P70533	METALLOPROTEINASE INHI	2.28e-84
6	306	18.6	50	2	Q16121	TISSUE INHIBITOR OF ME	2.70e-48
7	208	12.7	158	3	Q21265	SIMILAR TO METALLOPROT	7.32e-25
8	100	6.1	383	10	062771	PREADIPOCYTE FACTOR 1.	1.24e-02
9	100	6.1	384	9	056365	THERMOSTABLE ALKALINE	1.24e-02
10	99	6.0	38	10	061720	MESSENGER RNA FRAGMENT	1.82e-02
11	99	6.0	325	4	095117	FRZB PRECURSOR.	1.82e-02
12	96	5.8	141	10	061692	HSA-C GENE CODING FOR	5.72e-02
13	95	5.8	512	8	Q40271	MYO-INOSITOL-1-PHOSPHA	8.35e-02
14	95	5.8	954	12	091909	C-KIT-RELATED KINASE 1	8.35e-02
15	90	5.5	226	11	041968	TEGMENT PROTEIN.	5.25e-01
16	90	5.5	289	9	028420	HYPOTHETICAL 32.9 KD P	5.25e-01
17	90	5.5	323	10	P97401	SECRETED FRIZZLED-RELA	5.25e-01
18	90	5.5	325	2	092765	FRZB PRECURSOR.	5.25e-01
19	90	5.5	325	2	099686	FRIZZLED.	5.25e-01
20	90	5.5	325	2	000181	FRITZ.	5.25e-01

21	90	5.5	668	9	048297	HISTIDINE KINASE.	5.25e-01
22	89	5.4	113	10	061259	ABELSON MURINE LEUKEMI	7.51e-01
23	89	5.4	114	10	061260	ABELSON MURINE LEUKEMI	7.51e-01
24	89	5.4	115	2	013691	ABL PROTEIN (FRAGMENT)	7.51e-01
25	89	5.4	119	10	P97896	ABELSON MURINE LEUKEMI	7.51e-01
26	89	5.4	119	2	013915	C-ABL (FRAGMENT).	7.51e-01
27	89	5.4	138	10	061261	ABELSON MURINE LEUKEMI	7.51e-01
28	89	5.4	144	2	013848	BCR/C-ABL ONCOGENE PRO	7.51e-01
29	89	5.4	156	2	014020	BCR/C-ABL ONCOGENE PRO	7.51e-01
30	89	5.4	164	2	013690	HYPOTHETICAL PROTEIN (7.51e-01
31	89	5.4	181	10	061253	C-ABL PROTEIN, TYPE II	7.51e-01
32	89	5.4	182	10	061255	C-ABL PROTEIN, TYPE II	7.51e-01
33	89	5.4	187	10	061254	C-ABL PROTEIN, TYPE I	7.51e-01
34	89	5.4	206	10	061252	C-ABL PROTEIN, TYPE IV	7.51e-01
35	89	5.4	284	2	013692	BCR/ABL TRANSFORMED	7.51e-01
36	88	5.4	337	9	034234	SUGAR PHOSPHATASE.	1.07e+00
37	88	5.4	365	7	037993	MAJOR HEAD PROTEIN.	1.07e+00
38	88	5.4	385	10	062208	STROMAL CELL DERIVED P	1.07e+00
39	88	5.4	583	9	030411	POTATIVE ABC-TRANSPORT	1.07e+00
40	89	5.4	1130	2	013870	PROTO-ONCOGENE TYROSIN	7.51e-01
41	89	5.4	1149	2	013869	PROTO-ONCOGENE TYROSIN	7.51e-01
42	87	5.3	433	3	023275	SIMILAR TO S. CEREVISI	1.52e+00
43	87	5.3	640	10	009182	INTERGRIN BETA-7 SUBUNI	1.52e+00
44	87	5.3	895	12	091227	GLUTAMATE RECEPTOR SUB	1.52e+00
45	87	5.3	895	12	091225	GLUTAMATE RECEPTOR SUB	1.52e+00

ALIGNMENTS

RESULT 1	ID	060453	PRELIMINARY:	PRT:	196 AA.
AC	060453:				
DT	01-NOV-1996 (TREMBLER, 01, CREATED)				
DT	01-NOV-1996 (TREMBLER, 01, LAST SEQUENCE UPDATE)				
DT	01-JAN-1998 (TREMBLER, 03, LAST ANNOTATION UPDATE)				
DE	TISSUE INHIBITOR OF METABO PROTEINASE (FRAGMENT).				
OS	CRICETULUS LONGICAUDATUS (LONG-TAILED HAMSTER).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;				
CC	EUPHERIA; RODENTIA.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RA	SUZUKI Y.;				
RL	SUBMITTED (NOV-1993) TO EMBL/GENBANK/DBJ DATA BANKS.				
DR	EMBL: X75924; G414877; .				
DR	PROSITE: P500288; TIMP; 1.				
FT	NON_TER				
FT	CHAIN				
SQ	SEQUENCE 196 AA; 21941 MW; 2DE3230A CRC32;				

Query Match	Best Local Similarity	99.08;	Score 1466;	DB 10;	Length 196;
Matches 193;	Conservative 2;	Mismatches 0;	Indels 0;	Gaps 0;	
Db	2	ACSCSPVHPQAFNADYVIRAKAVSEKEVDSGNDIYGNPIKRIQYETIKQIMFGKPPKD	61		
QY	26	acscspvhpqafncadvirakavsekevdsyndlynpkrlqyeltkqlmfmfygpekd	85		
Db	62	IEFTYTABSSAVGVSLDVGKREYLIAGKAGDGRKMHITLCDFIVPMDTISTQKSLN	121		
QY	86	ieftytapsavcgyldvgkkeyliagkaegdgkmltldfivpmdtisttqkksln	145		
Db	122	HYKMGCEKTRKRCMICYISSPDECLMDMYTEKSIHGAKRFACIKRSDGSCAWYR	181		
QY	146	hykmgcecktrcmilpcyisspdeclmmdvteknngqakltaclksdgscaawy	205		
Db	182	GAAPKQEFIDEDP 196			
QY	206	gaappkqefildp 220			
RESULT 2					
ID	042146	PRELIMINARY:	PRT:	220 AA.	

Db 275 EENIPFINGSPONTFVPG-LIDLAIKNSLIGDDFGSGQTRMSVLYDFV 325
 QY 83 ekdieflytapssa-vcgvsldvggkkeyllagka--egdgmhltldcfiv 131

RESULT 14
 ID 091909 PRELIMINARY; PRT; 954 AA.

AC 091909;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
 DE C-KIT-RELATED KINASE 1 (XKRK1) PRECURSOR (XKRK1).
 OS XENOPUS LAEVIS (AFRICAN CLAMED FROG).
 OC EUKARYOTA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; AMPHIBIA; ANURA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95344996.
 RA BAKER C.V., SHARPE C.R., TORPEY N.P., HEASMAN J., WYLIE C.C.;
 MECH. DEV. 50:217-228(1995).
 EMBL; 248770; G763034;
 PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
 AW SIGNAL.
 FT SIGNAL. 1 19 POTENTIAL.
 FT CHAIN 20 954 C-KIT-RELATED KINASE 1.
 SQ SEQUENCE 954 AA; 106859 MW; 3B301EB3 CRC32;

Query Match 5.8%; Score 95; DB 12; Length 954;
 Best Local Similarity 31.7%; Pred. No. 8.35e-02;
 Matches 20; Conservative 17; Mismatches 22; Indels 4; Gaps 4;

Db 367 ELHLIRL-KGTREKGVYFTTNSDDASVSFNIOVTRPEILIAERT-SEGTLQCVATGF 424
 QY 72 elkgkkmkqpkedieflytpssavcgsldvgk-k-eyllagkaegdgkmhltldcf 129
 Db 425 PVP 427
 QY 130 lvp 132

RESULT 15
 ID 041968 PRELIMINARY; PRT; 226 AA.

AC 041968;
 DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
 TT TEGUMENT PROTEIN.
 GAMMAHV. ORF67.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE; GAMMAHERPESVIRINAE.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-WDMS;
 RX MEDLINE; 97366649.
 RA VIRGIN H.W. IV, LATREILLE P., WAMSLEY P., HALLSWORTH K., WECK R.E.,
 DAL CANTO A.J., SPECK S.H.;
 RL J. VIROL. 71:5894-5904(1997).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-WDMS;
 RA LATREILLE P., WAMSLEY P., WATERSTON R.H.;
 RL SUBMITTED (APR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U97553; G2317997;
 SQ SEQUENCE 226 AA; 25881 MW; D2AD43E8 CRC32;

Query Match 5.5%; Score 90; DB 11; Length 226;
 Best Local Similarity 35.7%; Pred. No. 5.25e-01;
 Matches 10; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

Db 92 LKCEMSPPRIDFOYGNRVNMACDVNLE 119
 QY 76 lkmfkgpkedieflytpassavcgsld 103

Search completed: Mon May 4 14:51:34 1998
 Job time : 30 secs.

(a) (b) (c) (d) (e)

OSTHUES A., KNAUPER V., OBERHOFF R., REINKE H., TSCHESCHE H.;
FEBS LETT. 296:16-20(1992).
[81]
STRUCTURE BY NMR OF 27-153.
MEDLINE: 95001893.
WILLIAMSON R.A., MARTORELL G., CARR M.D., MORPHY G., DOCHERTY A.J.P.,
FREDMAN R.B., FEENEY J.;
BIOCHEMISTRY 33:11745-11759(1994).
-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
-1- PPM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
EMBL: J05593; G33707; -
EMBL: S48568; G298202; -
EMBL: U44381; G1517893; JOINED.
EMBL: U44381; G1517893; JOINED.
EMBL: U44382; G1517893; JOINED.
EMBL: U44383; G1517893; JOINED.
EMBL: M32304; G307195; -
EMBL: X54533; G37181; -
PIR: A34415; A34415.
PIR: A34464; A34464.
PIR: B35996; B35996.
PIR: A37128; A37128.
PIR: S20319; S20319.
MIM: 188825; -
PROSITE: PS00288; TIMP. 1.
METALLOPROTEINASE INHIBITOR; SIGNAL.
SEQUENCE 1 26
1 SIGNAL 1 26
2 CHAIN 27 220
3 DISULFID 27 98
4 DISULFID 29 127
5 DISULFID 39 152
6 DISULFID 154 201
7 DISULFID 172 193
8 DISULFID 159 164
9 DISULFID 17 19
10 CONFLICT 78 78
11 CONFLICT 82 82
12 CONFLICT 96 96
13 CONFLICT 101 101
14 CONFLICT 118 118
15 CONFLICT 122 122
16 CONFLICT 150 150
17 CONFLICT 175 175
18 SO SEQUENCE 220 AA; 24399 MW; 834D259A CRC32;
Jery Match 100.0%; Score 1643; DB 1; Length 220;
Best Local Similarity 100.0%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
Matches 220; Conservative 0; Mismatches 0;
DB 1 MGAARLTLALGLLLATLRLPADACSPVHPQAFNCADVIRAKAVSEKVDGND 60
QY 1 mgsaaatlrlalglalllallrlpadacscspvhpqafncadvirakavsekevdsnd 60
DB 61 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLAGRAEGDG 120
QY 61 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLAGRAEGDG 120
DB 121 KMITLCLDFVPMDDLTSTQKSLNHRVQMGCECKITRCMICYISSPDECLMDMWT 180
QY 121 kmhltclclfdvpmddltstqkslnhryvmgceckitrcmipcyisspdeclmmdwvte 180
DB 181 KNINGHOAKFFACIKRSDGSCAWRGAPROEFLIDEDP 220
QY 181 kninghoakffackikrsgdscawrygaappqeflidedp 220
RESULT 2 STANDARD: PRT: 220 AA.
ID TIM2_RAT
AC P30121;
DT 01-APR-1993 (REL. 25, CREATED)

01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF
DE METALLOPROTEINASES-2).
GN TIMP2 OR TIMP-2.
OC RATUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
[1]
SEQUENCE FROM N.A.
RC STRAIN-SPRAGUE-DAWLEY; TISSUE-BONE;
RX MEDLINE: 94263207.
RA COOK T.F., BURKE J.S., BERGMAN K.D., QUINN C.O., JEFFREY J.J.,
RA PATRIDGE N.C.;
RL ARCH. BIOCHEM. BIOPHYS. 311:313-320(1994).
[2]
SEQUENCE FROM N.A.
RN TISSUE-MAMMARY;
RC GIBBONS K.L., O'GRADY R.L., PIPER A.A.;
RA SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
[3]
SEQUENCE FROM N.A.
RN MEDLINE: 94326839.
RX SANTORO M., BATTAGLIA C., ZHANG L., CARLOMAGNO F., MARTELLI M.L.,
RA SALVATORE D., FUSCO A.;
RL EXP. CELL RES. 213:398-403(1994).
[4]
SEQUENCE FROM N.A.
RN TISSUE-TESTIS;
RC MEDLINE: 96384329.
RX GRIMA J., CALCAGNO K., CHENG C.Y.;
RL J. ANDROL. 17:263-275(1996).
[5]
SEQUENCE OF 27-48.
RN MEDLINE: 92117648.
RX ROSMIT W.T., MCCOY D.W., PATRIDGE N.C., JEFFREY J.J.;
RL ARCH. BIOCHEM. BIOPHYS. 292:402-410(1992).
-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
-1- PPM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
EMBL: U14526; G540205; -
EMBL: L31884; G1141730; -
EMBL: S72594; G619233; -
EMBL: S82718; G1881814; -
PIR: S20325; S20325.
PROSITE: PS00288; TIMP. 1.
METALLOPROTEINASE INHIBITOR; SIGNAL.
SEQUENCE 1 26
1 SIGNAL 1 26
2 CHAIN 27 220
3 DISULFID 27 98
4 DISULFID 29 127
5 DISULFID 39 152
6 DISULFID 154 201
7 DISULFID 172 193
8 DISULFID 159 164
9 DISULFID 17 19
10 CONFLICT 78 78
11 CONFLICT 82 82
12 CONFLICT 96 96
13 CONFLICT 101 101
14 CONFLICT 118 118
15 CONFLICT 122 122
16 CONFLICT 150 150
17 CONFLICT 175 175
18 SO SEQUENCE 220 AA; 24356 MW; 222FE8DA CRC32;
Query Match 99.2%; Score 1630; DB 1; Length 220;
Best Local Similarity 98.2%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
Matches 216; Conservative 3; Mismatches 1;
DB 1 MGAARLTLALGLLLATLRLPADACSPVHPQAFNCADVIRAKAVSEKVDGND 60
QY 1 mgsaaatlrlalglalllallrlpadacscspvhpqafncadvirakavsekevdsnd 60
DB 61 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLAGRAEGDG 120
QY 61 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLAGRAEGDG 120

Db 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSIPDECIMDMWTE 180
 121 kmhltldfivpmdtistokkslnryomgceckitrcpcmiicysipdecimdmwte 180
 Oy 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSIPDECIMDMWTE 180
 121 kmhltldfivpmdtistokkslnryomgceckitrcpcmiicysipdecimdmwte 180
 Db 181 KSHINGOAKFPACIKRSDSCAWYRGAAPKOEFLIEDP 220
 181 kshinghaktfacikrdsdscawyrgaapkefldiedp 220
 Oy 181 KSHINGOAKFPACIKRSDSCAWYRGAAPKOEFLIEDP 220
 181 kshinghaktfacikrdsdscawyrgaapkefldiedp 220

RESULT 3 STANDARD: PRT: 220 AA.
 ID TIM2_MOUSE
 AC P25785;
 DT 01-MAY-1992 (REL. 22, CREATED)
 DT 01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF METALLOPROTEINASES-2).
 GN TIMP2 OR TIMP-2.
 OS MUS MUSCULUS (MOUSE).
 OS EUTHERIA: RODENTIA.
 OS EUTHERIA: RODENTIA.
 [1] SEQUENCE FROM N.A.
 RC STRAIN-BALB/C;
 RX MEDLINE: 92290292.
 RX SHIMIZU S., MALIK K., SEJIMA H., KISHI J.I., HAYAKAWA T., KOIMAI O.;
 RA GENE 114:291-292(1992).
 RL (2)
 RN SEQUENCE FROM N.A.
 RP MEDLINE: 92347693.
 RX LECO K.J., HAYDEN L.J., SHARMA R.R., ROCHELLEAU H., GREENBERG A.H.,
 RA EDWARDS D.R.;
 RA GENE 117:209-217(1992).
 RL (3)
 RN PRELIMINARY SEQUENCE OF 27-62.
 RP MEDLINE: 91226375.
 RX KISHI J.I., OGAWA K., YAMAMOTO S., HAYAKAWA T.;
 RA MATRIX 11:10-16(1991).
 RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- P.T.M: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC EMBL: X62622; G54802;
 DR EMBL: M82858; G202052;
 DR EMBL: M93954; G202054;
 DR PIR: S15987; S15987.
 UR PIR: JH0683; JH0683.
 MCD: MGI:98753; TIMP2.
 PROSITE: PS00288; TIMP: 1.
 METALLOPROTEINASE INHIBITOR: SIGNAL.
 METALLOPROTEINASE INHIBITOR 2.
 FT CHAIN 1 26
 FT DISULFID 27 98
 FT DISULFID 29 127
 FT DISULFID 39 152
 FT DISULFID 154 201
 FT DISULFID 172 193
 FT DISULFID 159 164
 FT DISULFID 12 12
 FT DISULFID 21 21
 FT CONFLICT 195 195
 FT CONFLICT 220 AA: 24328 MW; EBC62FFC CRC32;
 SQ SEQUENCE 220 AA: 24328 MW; EBC62FFC CRC32;
 Query Match 98.6%; Score 1620; DB 1; Length 220;
 Best local similarity 97.3%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
 Matches 214; Conservative 5; Mismatches 1; Indels 0; Gaps 0;
 Db 1 MGAASLPLAFCLLGLTLLPRADSCSPVPOAFNCNADVIYRAKAVSEKESVDSND 60
 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 Oy 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 Db 61 IYGNPIKRIQYEIKOIKMFPGDDIEFIYTAAPAAGVSLDVGKREYILAGKAGSDG 120
 61 iygnpikrioyeikoiikmfpgddiefiytapaagvslvdkgkreyilagkaesdg 120

Oy 61 IYGNPIKRIQYEIKOIKMFPGDDIEFIYTAAPAAGVSLDVGKREYILAGKAGSDG 120
 61 iygnpikrioyeikoiikmfpgddiefiytapaagvslvdkgkreyilagkaesdg 120
 Db 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSIPDECIMDMWTE 180
 121 kmhltldfivpmdtistokkslnryomgceckitrcpcmiicysipdecimdmwte 180
 Oy 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSIPDECIMDMWTE 180
 121 kmhltldfivpmdtistokkslnryomgceckitrcpcmiicysipdecimdmwte 180
 Db 181 KSHINGOAKFPACIKRSDSCAWYRGAAPKOEFLIEDP 220
 181 kshinghaktfacikrdsdscawyrgaapkefldiedp 220
 Oy 181 KSHINGOAKFPACIKRSDSCAWYRGAAPKOEFLIEDP 220
 181 kshinghaktfacikrdsdscawyrgaapkefldiedp 220

RESULT 4 STANDARD: PRT: 220 AA.
 ID TIM2_BOVIN
 AC P16368;
 DT 01-AUG-1990 (REL. 15, CREATED)
 DT 01-MAY-1991 (REL. 18, LAST SEQUENCE UPDATE)
 DT 01-FEB-1995 (REL. 31, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF METALLOPROTEINASES-2) (COLLAGENASE INHIBITOR).
 GN TIMP2.
 OS BOS TAURUS (BOVINE).
 OS EUTHERIA: ARTIODACTYLA.
 [1] SEQUENCE FROM N.A.
 RC MEDLINE: 90207285.
 RX BOONE T.C., JOHNSON M.J., DE CIERCK Y.A., LANGLEY K.E.;
 RA PROC. NATL. ACAD. SCI. U.S.A. 87:2800-2804(1990).
 RL (2)
 RN SEQUENCE OF 27-71.
 RP TISSUE-CARTILAGE;
 RX MEDLINE: 86140235.
 RA MURRAY J.B., ALLISON K., SUDHALTER J., LANGER R.;
 RA J. BIOL. CHEM. 261:4154-4159(1986).
 RL (3)
 RN SEQUENCE OF 27-71.
 RP MEDLINE: 90008914.
 RX DE CIERCK Y.A., YEAN T.D., RATZIN B.J., LU H.S., LANGLEY K.E.;
 RA J. BIOL. CHEM. 264:17445-17453(1989).
 RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- P.T.M: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC EMBL: M32303; G163342;
 DR EMBL: A25322; A25322.
 DR PIR: A35986; A35986.
 DR PIR: A34468; A34468.
 DR PROSITE: PS00288; TIMP: 1.
 METALLOPROTEINASE INHIBITOR: SIGNAL.
 METALLOPROTEINASE INHIBITOR 2.
 FT CHAIN 1 26
 FT DISULFID 27 98
 FT DISULFID 29 127
 FT DISULFID 39 152
 FT DISULFID 154 201
 FT DISULFID 172 193
 FT DISULFID 159 164
 FT DISULFID 42 42
 FT DISULFID 56 56
 FT CONFLICT 68 68
 FT CONFLICT 220 AA: 24355 MW; 0543B3EB CRC32;
 SQ SEQUENCE 220 AA: 24355 MW; 0543B3EB CRC32;
 Query Match 94.3%; Score 1550; DB 1; Length 220;
 Best local similarity 91.8%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
 Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;
 Db 1 MGAASLPLAFCLLGLTLLPRADSCSPVPOAFNCNADVIYRAKAVSEKESVDSND 60
 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 Oy 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 1 mgaasrlfialglllaltllrpadscspvhpqgafcnadvirakavsekevdsnd 60
 Db 61 IYGNPIKRIQYEIKOIKMFPGDDIEFIYTAAPAAGVSLDVGKREYILAGKAGSDG 120
 61 iygnpikrioyeikoiikmfpgddiefiytapaagvslvdkgkreyilagkaesdg 120

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RN	[10]	RP VARIANT SFD CYS-179.
RX	MEDLINE:	96177683.
RA	FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., WEBER B.H.F.;	
RL	HOM. MOL. GENET.	4:2415-2416(1995).
RN	[11]	
RP	VARIANT SFD CYS-191.	
RA	FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., APFELSTEDT-SYLLA E.,	
RL	MEDLINE:	96311630.
RA	WEBER B.H.F.;	
J.	MED. GENET.	33:233-236(1996).
-I-	FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)	
-I-	AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-	
-I-	SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.	
-I-	SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.	
-I-	DISEASE: DEFECTS IN TIMP3 ARE THE CAUSE OF SORSEBY'S FUNDUS	
-I-	DYSTROPHY (SFD), A RARE AUTOSOMAL DOMINANT MACULAR DISORDER WITH	
-I-	AN AGE OF ONSET IN THE FOURTH DECADE. IT IS CHARACTERIZED BY LOSS	
-I-	OF CENTRAL VISION FROM SUBRETINAL NEOVASCULARIZATION AND ATROPHY	
-I-	OF THE OCCULAR TISSUES. GENERALLY, MACULAR DISCIFORM DEGENERATION	
-I-	DEVELOPS IN THE PATIENTS' EYE WITHIN 6 MONTHS TO 6 YEARS.	
-I-	SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.	
CC	EMBL:	U14394; G608129; -
DR	EMBL:	U02571; G472310; -
DR	EMBL:	X76227; G495252; -
DR	EMBL:	Z30183; G520932; ALT_SEQ.
DR	EMBL:	S78453; G398826; -
DR	EMBL:	U33114; G1215682; JOINED.
DR	EMBL:	U33110; G1215682; JOINED.
DR	EMBL:	U33111; G1215682; JOINED.
DR	EMBL:	U33112; G1215682; JOINED.
DR	EMBL:	U33113; G1215682; JOINED.
DR	EMBL:	U38953; G1304484; JOINED.
DR	EMBL:	U38952; G1304484; JOINED.
DR	EMBL:	U38953; G1304484; JOINED.
DR	EMBL:	U38954; G1304484; JOINED.
DR	EMBL:	U67195; G1519558; -
DR	EMBL:	L15078; G407035; -
DR	PIR:	S45317; S45317.
DR	MIM:	188826; -
DR	MIM:	136900; -
DR	PROSITE:	PS00288; TIMP; 1.
KW	METALLOPROTEINASE INHIBITOR;	POTENTIAL.
KW	SIGNAL.	1 23
FT	CHAIN	24 211
FT	DISULFID	24 91
FT	DISULFID	26 118
FT	DISULFID	36 143
FT	DISULFID	145 192
FT	DISULFID	150 155
FT	DISULFID	163 184
FT	DISULFID	179 179
FT	VARIANT	191 191
FT	VARIANT	204 204
FT	VARIANT	16 16
FT	CONFLICT	18 19
FT	CONFLICT	21 22
FT	CONFLICT	22 23
FT	CONFLICT	23 23
FT	SEQUENCE	211 AA; 24145 MM; SFAL5AAA CRC32;
QY	Query Match	42.3%; Score 695; DB 1; Length 211;
QY	Best local Similarity	43.6%; Pred. No. 1,17e-152;
QY	Matches	95; Conservative 56; Mismatches 55; Indels 12; Gaps 10;
DB	2 TPPLGLIVLIGSGMSGDMGAECATCSPPHPDADFNSDIVIRAKYVKKKLVKEGP--FGT	59
QY	7 tltatlgllla-tl-rpadccspvnpqafcnadvtirakvsekevsndnygn	64
DB	60 -L--V--YTIKMKMYRGFTMPHVOTIFHEASEISCGKLEVN-KYQYLINGRYV-DGRM	113
QY	65 ptkrtgylxkymfky-pdk-dletilytapsavcyslvdtvggkey-lisgaegdgkm	122
DB	114 YTGICNVVERMDQLTSQRKGLNYVRHLCKCNCKIKSCYYLLPCFTVTSKNCECLMTDLMSNF	173

DE METALLOPROTEINASES-3).
GN TIMP3 OR TIMP-3 OR SUN.
OS MUS MOSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.

[1]
RN SEQUENCE FROM N.A.
RX MEDLINE: 941179361.
RA LECO K.J., KHOKHA R., PAYLOFF N., HAWKES S.P., EDWARDS D.R.;
RL J. BIOL. CHEM. 269:9352-9360(1994).

[2]
RN SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE=SKIN, AND LUNG;
RX MEDLINE: 94163596.
RA SUN Y., HEGAMTER G., COLBURN N.H.;
RL CANCER RES. 54:1139-1144(1994).

[3]
RN SEQUENCE FROM N.A.
RP TISSUE=LUNG;
RC MEDLINE: 9506582.
RX APTE S.S., HAYASHI K., SELDIN M.F., MATTEI M.-G., HAYASHI M.,
RA OLSEN B.R.;
RL DEV. DYN. 200:177-197(1994).

[4]
RN SEQUENCE FROM N.A.
RP MEDLINE: 95370262.
RX SUN Y., HEGAMTER G., KIM H., SITHANANDAM K., LI H., WATTS R.,
RA COLBURN N.H.;
RL J. BIOL. CHEM. 270:19312-19319(1995).

[5]
RN SEQUENCE FROM N.A.
RP STRAIN-129/SV;
RX MEDLINE: 95301511.
RA APTE S.S., OLSEN B.R., MURPHY G.;
RL J. BIOL. CHEM. 270:14313-14318(1995).

- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM, MAY FORM PART OF A TISSUE-
SPECIFIC ACTIVE RESPONSE TO REMODELING MATRIX.

- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.

- TISSUE SPECIFICITY: HIGHEST LEVELS ARE FOUND IN KIDNEY, LUNG AND
BRAIN FOLLOWED BY OVARY AND UTERUS. LOW LEVELS ARE FOUND IN BONE.

- INDUCTION: HIGHLY INDUCED BY PHORBOL ESTER (PMA), EGF AND
TRANSFORMING GROWTH FACTOR-BETA 1. ALSO INDUCED BY DECAETHASONE.

- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.

- EMBL: L27424; G439882; -
DR EMBL: Z30970; E264421; -
CC EMBL: L19622; G438811; -
DR EMBL: U26437; G1167534; -
DR EMBL: U26433; G1167534; JOINED.
DR EMBL: U26434; G1167534; JOINED.
DR EMBL: U26435; G1167534; JOINED.
DR EMBL: U26436; G1167534; JOINED.
DR PIR: A53532; A53532.
DR PIR: S43057; S43052.
DR MGD: MG1:96754; TIME3.
DR PROSITE: PS00286; TIME: 1.
KW METALLOPROTEINASE INHIBITOR; SIGNAL.
KW STGNL 1 23 POTENTIAL.
FT CHAIN 24 211 METALLOPROTEINASE INHIBITOR 3.
FT DISULEID 24 91 BY SIMILARITY.
FT DISULEID 26 118 BY SIMILARITY.
FT DISULEID 36 143 BY SIMILARITY.
FT DISULEID 145 192 BY SIMILARITY.
FT DISULEID 150 155 BY SIMILARITY.
FT DISULEID 163 184 BY SIMILARITY.
SQ SEQUENCE 211 AA; 24182 MW; CCB6E436 CRC32;

Query Match 41.8%; Score 686; DB 1; Length 211;
Best Local Similarity 43.18%; Pred. No. 3,44e-150; Indels 12; Gaps 10;
Matches 94; Conservative 56; Mismatches 56; Indels 12; Gaps 10;
DB 2 TPPLGLVLTLSQMSLGHWGAECCTSPSHPDARCNSDIYRATVGCKTLVKESP--FGR 59

OY	7	tlaialgllia-le-lrpadacscspvhpqatcnadvlirakavekevdsgndlygn	64
Db	60	-L--V-YTIKQMKATRGSKMHPVOIYTEASESLGCIKLEVN-KYOYLTLGRV-EGKM	113
OY	65	pikrtgyeiklikimtkfg-pek-diefilytapsavcsyldvgkkkeyllaagkaeqdgm	122
Db	114	YTGLCNFEERMDHLLTLSORKGLANRYHLHGCGCKIKSCGYLPCEFTSNKECLMTDMLNFG	173
OY	123	htleclifvpwclstctckkslnhyqmgecckltlrcpmjpcylsspedclmwdvlekn	182
Db	174	YPGYOSKHACIROKGKGVCYSWYRMAPPDKSISNATDP	211
OY	183	Inghqactfacickrsdgscawyraepkxgfliedp	220
RESULT	8		
ID	TIM3_CHICK	STANDARD;	PRT; 212 AA.
AC	P26652;		
DT	01-AUG-1992 (REL. 23, CREATED)		
	01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)		
	01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)		
	METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (21 KD PROTEIN OF EXTRACELLULAR MATRIX).		
DE	TIMP3 OR TIMP-3.		
GN	GALLUS GALLUS (CHICKEN).		
OS	EUKARYOTA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE; GALIIORNES.		
OC	[1]		
RN	SEQUENCE FROM N.A.		
RP	TISSUE-EMBRYONIC FIBROBLAST;		
RC	MEDLINE; 92281050.		
RX	PAYLOFF N., STASKUS P.W., KISHANANI N.S., HAWKES S.P.; J. BIOL. CHEM. 267:17321-17326(1992).		
RA	[2]		
RL	SEQUENCE OF 25-53.		
RN	TISSUE-FIBROBLAST;		
RP	MEDLINE; 91093162.		
RX	STASKUS P.W., NASIARZ F.R., PALLANCK L.J., HAWKES S.P.; J. BIOL. CHEM. 266:449-454(1991).		
RA	-1 FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.		
CC	-1 SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.		
CC	-1 SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL; M94531; G211902; -.		
DR	PIR; A39043; A39043.		
DR	PIR; A43429; A43429.		
DR	PROSITE; PS00288; TIMP. 1.		
DR	METALLOPROTEINASE INHIBITOR; SIGNAL.		
CC	SIGNAL		
FT	CHAIN	1 24	
FT	DISULEID	25 212	METALLOPROTEINASE INHIBITOR 3.
FT	DISULEID	25 92	BY SIMILARITY.
FT	DISULEID	27 119	BY SIMILARITY.
FT	DISULEID	37 144	BY SIMILARITY.
FT	DISULEID	146 193	BY SIMILARITY.
FT	DISULEID	151 156	BY SIMILARITY.
FT	DISULEID	164 185	BY SIMILARITY.
SO	SEQUENCE	212 AA;	24504 MM; C0489C6F CRC32:
	Query Match	41.8%;	Score 686; DB 1; Length 212;
	Best Local Similarity	45.2%;	Pred. No. 3,44e-150;
	Matches 90;	Conservative 49;	Mismatches 50; Indels 10; Gaps 8;
Db	22	AEACTGVPIHDFODFAFNDSIVIRAKVVGKTKMRGP--FGF-M-R--YTYKQMKMYBGFQ	75
OY	24	adacscepvdpqgfcfnadvvlirkaxsevevdsgndlygrlfridyeikqlmyitrg-p	82
Db	76	IMPHVOIYITEASESLGCVKLEVN-KYOYLITGRVY-EGKYTGIGLCMWYEKWRDLTSOR	133
OY	83	ek-dieffiytapsavcsyldvgkkkeyllaagkaeqdgmhtleclifvpwclstctck	141
Db	134	KGLNHRLGCGCKIRPCYLIIPCATSKNECITWDMLNFGSHQAKHKHAKHCIOAGVEYC	193

Db	194	SWYRGMAPDPDKTIINADP	212
Qy	202	aywrgaappkqgefidcdp	220
Db	142	ksnhrymgceckilttrcpmipcyisspdeclmndwvtekhinghakiacikrtdsgsc	201
Qy	142	ksnhrymgceckilttrcpmipcyisspdeclmndwvtekhinghakiacikrtdsgsc	201
Db	194	SWYRGMAPDPDKTIINADP	212
Qy	202	aywrgaappkqgefidcdp	220
RESULT	9	STANDARD;	PRT; 211 AA.
ID	TIM3_RAT		
AC	P48032;		
DT	01-FEB-1996 (REL. 33, CREATED)		
DT	01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)		
DT	01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEININASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEININASES-3).		
GN	TIMP3 OR TIMP-3.		
OS	RATTUS NORVEGICUS (RAT).		
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;		
CC	EUTHERIA; RODENTIA.		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RA	WU I., MOSES M.A.;		
RL	SUBMITTED (MAY 1995) TO EMBL/GENBANK/DBJ DATA BANKS.		
CC	-I- FUNCTION: COMPLEXES WITH METALLOPROTEININASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.		
CC	-I- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.		
CC	-I- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL: U2701. G971206. -;		
DR	PROSITE: PS00288; TIMP. 1.		
KM	METALLOPROTEININASE INHIBITOR; SIGNAL.		
FT	SIGNAL	1	23
FT	CHAIN	1	23
FT	DISULFID	24	211
FT	DISULFID	24	91
FT	DISULFID	26	118
FT	DISULFID	36	143
FT	DISULFID	145	192
FT	DISULFID	150	155
FT	DISULFID	163	184
SO	SEQUENCE	211 AA;	24226 MW; 19624EF2F CRC32;
Query Match		41.4%;	Score 680; DB 1; Length 211;
Best Local Similarity		42.7%;	Pred. No. 1,52e-148;
Matches	93;	Conservative	56; Mismatches 57; Indels 12; Gaps 10;
Db	2	TPWGLVYLSCWLSGHNHGTGECACSPSHODACNSDIDYIRAKVVGKKIYKSGP--FGT	59
Qy	7	tlrlalglilla-cl-lrpdacscspvhpqgacnadviraavekevsqndilgn	64
Db	60	-L-V-YTIKMKMYRGHSGKMPHQVLIHTSESESLCLAKLEVN-KYQYLLTGRVY-EGKM	113
Qy	65	pkiqiyekiklmhfkgy-pek-diefilytpssavcgsydsdgkkyllagkaegdgkm	122
Db	114	YTGACNVEYEMDHLTLSORGLNTRYHMGCKNCKIKSCYIPLCEVTSKSECLWTDMSNFG	173
Qy	123	htlclldifpvdclstlctqkkslnhyrgmgeckilttrcpmipcyisspdeclmndwvtekn	182
Db	174	YPGYQSHYACIRKQGYCISYRKNAPPDSSISNATDP	211
Qy	183	inghakiacikrtdsgscawyrgaappkqgefidcdp	220
RESULT	10	STANDARD;	PRT; 207 AA.
ID	TIM1_PAPCY		
AC	P48061;		
DT	01-FEB-1996 (REL. 33, CREATED)		
DT	01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)		
DT	01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEININASE INHIBITOR 1 PRECURSOR (TIMP-1).		
GN	TIMP1.		
OS	PATIO CYNOCEPHALUS (YELLOW BABOON).		
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;		
CC	EUTHERIA; PRIMATES.		

KW SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 197
 FT DISULFID 155 160
 FT DISULFID 168 189
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT CONFLICT 23 23
 FT CONFLICT 44 44
 FT SEQUENCE 207 AA; 8B7E3B4E CRC32;
 Query Match 31.7%; Score 521; DB 1; Length 207;
 Best Local Similarity 41.1%; Pred. No. 2,28e-105;
 Matches 81; Conservative 39; Mismatches 70; Indels 7; Gaps 7;
 7 LASSGILLMLIAPSRACCTVPPHPOTAFPCNSDLVIRAKFVGTPVNOQT-LYORREIKM 65
 10 lalglillatllrpdacscspvhpqafcnadvlirakavsekevdsndlygn-pikr 68
 Db 66 TK-MKSGDAL-GHATDIRFYTPPAMESVCGSHKSNRSEEFILNQLR-NGILHTTC 122
 69 lqyeltqlmktkpkedeliytpassavcgsldyggkx-yliagkaegdqkmltlic 127
 Db 123 SEVAPWNSISLQSRGFTKTYACGDCQVACASIPCHLESDFHCLMTDSSLGSD-KGF 181
 128 dflpwtldstltqkkslnhygmge-clitrcpmipcyisspdeclmndvtekninh 186
 Qy 128 dflpwtldstltqkkslnhygmge-clitrcpmipcyisspdeclmndvtekninh 186
 Db 183 QSRHLACLPOEPGLCAW 198
 187 qaktfacklrdsgscaw 203
 Qy 187 qaktfacklrdsgscaw 203
 RESULT 12
 ID TIM1_RABIT STANDARD; PRT; 206 AA.
 AC P20614;
 DT 01-FEB-1991 (REL. 17, CREATED)
 DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
 GN TIMP1.
 OS ORCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 CC EUTHERIA; LAGOMORPHA.
 [1]
 SEQUENCE FROM N.A.
 MEDLINE; 89214135.
 RA HOROWITZ S., DAFNI N., SHAPIRO D.L., HOLM B.A., NOTTER R.H.,
 RA OUBILE D.J.;
 J. BIOL. CHEM. 264:7092-7095(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PPM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 DR EMBL: J04712; G165743; -
 DR PIR: A33350; A33350.
 DR PROSITE; PS00288; TIMP. 1.
 KW GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
 FT SIGNAL. 1 23
 FT CHAIN 24 206 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 196
 FT DISULFID 155 160
 FT DISULFID 168 188
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT SEQUENCE 207 AA; 7D11ED5F CRC32;

SQ SEQUENCE 206 AA; 22758 MM; 772EF1D CRC32;
 Query Match 31.5%; Score 518; DB 1; Length 206;
 Best Local Similarity 40.1%; Pred. No. 1.46e-104;
 Matches 79; Conservative 39; Mismatches 71; Indels 8; Gaps 8;
 Db 7 LASSMLLMVLAPSRACCTVPPHPOTAFPCNSDLVIRAKFVGAEVNHHT-LYORREIKT 65
 10 lalglillatllrpdacscspvhpqafcnadvlirakavsekevdsndlygn-pikr 68
 Qy 66 TK-MKSGDAL-GHATDIRFYTPPAMESVCGSHKSNRSEEFILNQLR-NGILHTTC 122
 69 lqyeltqlmktkpkedeliytpassavcgsldyggkx-yliagkaegdqkmltlic 127
 Db 123 SEVAPWNSISLQSRGFTKTYACGDCQVACASIPCHLESDFHCLMTDSSLGSD-KGF 181
 128 dflpwtldstltqkkslnhygmge-clitrcpmipcyisspdeclmndvtekninh 186
 Qy 128 dflpwtldstltqkkslnhygmge-clitrcpmipcyisspdeclmndvtekninh 186
 Db 182 QSRHLACLPOEPGLCAW 198
 187 qaktfacklrdsgscaw 203
 Qy 187 qaktfacklrdsgscaw 203
 RESULT 13
 ID TIM1_BOVIN STANDARD; PRT; 207 AA.
 AC P20414;
 DT 01-FEB-1991 (REL. 17, CREATED)
 DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
 DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (EMBRYONIN-1) (EG-1).
 GN TIMP1.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 CC EUTHERIA; ARTIODACTYLA.
 [1]
 SEQUENCE FROM N.A.
 MEDLINE; 90365711.
 RA FREUDENSTEIN J., WAGNER S., LUCK R.M., EINSPIANIER R., SCHEIT K.H.;
 RA BIOCHEM. BIOPHYS. RES. COMMUN. 171:250-256(1990).
 [2]
 SEQUENCE FROM N.A.
 MEDLINE; 94257757.
 RA SATOH T., KOBAYASHI K., YAMASHITA S., KIKUCHI M., SENDAI Y., HOSHI H.;
 RL BIOL. REPROD. 50:835-844(1994).
 [3]
 RP PRELIMINARY SEQUENCE OF 24-69.
 RX MEDLINE; 90008914.
 RA DE CLERCQ Y.A., YEAN T.D., RATZKIN B.J., LU H.S., LANGLEY K.E.;
 RL J. BIOL. CHEM. 264:17445-17453(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PPM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 DR EMBL: M60073; G163761; -
 DR PIR: S70841; G546974; -
 DR PIR: A35685; A35685.
 DR PIR: B34468; B34468.
 DR PROSITE; PS00288; TIMP. 1.
 KW GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 197
 FT DISULFID 155 160
 FT DISULFID 168 189
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT SEQUENCE 207 AA; 23031 MM; 7D11ED5F CRC32;

Query Match 31.5%; Score 517; DB 1; Length 207;
Best Local Similarity 39.6%; Pred. No. 2.70e-104;
Matches 78; Conservative 42; Mismatches 70; Indels 7; Gaps 7;

Db 7 MASGILLMLLWLPASRACVCPHPOTAFNCNSDVIRAKFVGAENE-TALYOREIKM 65
10 lalglilllalllpadacscspvhpqafcnadvirakavsekevsndlygn-plkr 68
Qy 66 TK-MEKGFSLRDAP-DIRIYTPAMESVCGYFHRSONRSEEFLLIAGOL-SNGHLHTTTC 122
69 lqyelkqkfmfkpekdiefilytapsavcgsldvgkke-yllagkaegdgkmlhtlc 127
Db 123 SFAPAPMSASARBCGRTKTYAAGCECTVPCSSICCKOSDHCMTQDLTGSDKGF 182
128 dlivpdlstctqkkslnhyqmgce-ckltcpmipcyisspdeclwmdvteknlngh 186
Qy 183 QSRHLACPREPGICWTW 199
187 qakfacikrdsqscaw 203

RESULT 14
ID TIM1_SHEEP STANDARD; PRT; 207 AA.
AC P50122;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
GN TIMP1.
OS OVIS ARIES (SHEEP).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; ARTIODACTYLA.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-CORPORA LUTEA;
RX MEDLINE; 94102210.
RA SMITH G.W., GOETZ T.L., ANTHONY R.V., SMITH M.F.;
ENDOCRINOLOGY 134:344-352(1994).
RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL; S67450; G456990; -;
DR PROSITE; P500288; TIMP; 1.
KW GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
SQ SIGNAL.

FT CHAIN 1 23 BY SIMILARITY.
FT DISULFID 24 207 METALLOPROTEINASE INHIBITOR 1.
FT DISULFID 26 93 BY SIMILARITY.
FT DISULFID 36 122 BY SIMILARITY.
FT DISULFID 150 197 BY SIMILARITY.
FT DISULFID 155 160 BY SIMILARITY.
FT DISULFID 168 189 BY SIMILARITY.
FT CARBOHYD 53 53 POTENTIAL.
FT CARBOHYD 101 101 POTENTIAL.
SQ SEQUENCE 207 AA; 23057 MW; 890A6EEB CRC32;

Query Match 31.3%; Score 515; DB 1; Length 207;
Best Local Similarity 39.2%; Pred. No. 9.28e-104;
Matches 76; Conservative 42; Mismatches 69; Indels 7; Gaps 7;

Db 10 GILLMLLWLPASRACVCPHPOTAFNCNSDVIRAKFVGAENE-TALYOREIKM 67
13 gilllalllpadacscspvhpqafcnadvirakavsekevsndlygn-plkr 71
Qy 68 MEKGFSLRDAP-DIRIYTPAMESVCGYFHRSONRSEEFLLIAGOL-SNGHLHTTTC 125
72 elqykfmfkpekdiefilytapsavcgsldvgkke-yllagkaegdgkmlhtlc 130
Db 126 APNMSASARBCGRTKTYAAGCECTVPCSSICCKOSDHCMTQDLTGSDKGF 185

Qy 131 vpwldstlqtqkkslnhyqmgce-ckltcpmipcyisspdeclwmdvteknlngh 189
Db 186 HLACLPREPACTW 199
Qy 190 ffacikrdsqscaw 203

RESULT 15
ID TIM1_RAT STANDARD; PRT; 217 AA.
AC P30120;
DT 01-APR-1993 (REL. 25, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
GN TIMP1 OR TIMP-1.
OS RATUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-MISTAR; TISSUE-SKIN DORSAL;
RX MEDLINE; 95011636.
RA OKADA A., GARNIER J.M., VICAIRE S., BASSET P.;
GENE 147:301-302(1994).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-MAMMARY;
RA GIBBONS K.L., O'GRADY R.L., PIPER A.A.;
SUBMITTED (JAN-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [3]
RP SEQUENCE OF 39-156 FROM N.A.
RC TISSUE-TESTIS;
RA BOUJRAD N., GARNIER M., MARTIN B.M., PAPADOPOULOS V.;
SUBMITTED (OCT-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE OF 24-45.
RX MEDLINE; 92117648.
RA ROSWIT W.T., MCCOY D.W., PARRIDGE N.C., JEFFREY J.T.;
ARCH. BIOCHEM. BIOPHYS. 292:402-410(1992).
RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL; U06179; G468058; -;
DR EMBL; L31883; G1161234; -;
DR EMBL; U16022; G562119; ALT_SEQ.
DR PTR; S20326; S20336.
DR PROSITE; P500288; TIMP; 1.
KW GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
SQ SIGNAL.

FT CHAIN 1 23 BY SIMILARITY.
FT DISULFID 24 217 METALLOPROTEINASE INHIBITOR 1.
FT DISULFID 26 93 BY SIMILARITY.
FT DISULFID 36 122 BY SIMILARITY.
FT DISULFID 150 197 BY SIMILARITY.
FT DISULFID 155 160 BY SIMILARITY.
FT DISULFID 168 189 BY SIMILARITY.
FT CARBOHYD 77 77 POTENTIAL.
FT CARBOHYD 101 101 POTENTIAL.
FT CONFLICT 88 88 A -> V (IN REF. 3).
FT CONFLICT 149 149 V -> L (IN REF. 3).
SQ SEQUENCE 217 AA; 23793 MW; 6B3ABD6F CRC32;

Query Match 30.9%; Score 508; DB 1; Length 217;
Best Local Similarity 38.4%; Pred. No. 6.98e-102;
Matches 78; Conservative 39; Mismatches 78; Indels 8; Gaps 8;

Db 7 LASGILLMLLWLPASRACVCPHPOTAFNCNSDVIRAKFVGAENE-TALYOREIKM 65
10 lalglilllalllpadacscspvhpqafcnadvirakavsekevsndlygn-plkr 68

Db 66 TK-MLGFDAY-GNATGFRFAYTPAMESLGGYHKSONRSEEFLLIAGRLR-NGNLHITAC 122
QY 69 lgyelqikmfxgpekdiefiytlapsavcg-vslavgkkeyllagkaegdgkmltllc 127
Db 123 SEIYPMHNTSPAQOKAFVKYISAGCGVCTVFPSCAIPCKULESDSHCLMTDQIIMGSEKGY 182
QY 128 dliwpcdtlstqkkslnhrqmgce-ckltcrpmlpcyisspdeclmndwvleknlngh 186
Db 183 QSDHFACTPRNPDLCTWQYLGVS 205
QY 187 qakffactlrsdgscav-yrqaa 208

Search completed: Mon May 4 14:49:58 1998
Job time : 13 secs.

 W P E R E H
 (TM)

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Mpsrch_n n.a. - n.a. database search, using Smith-Waterman algorithm
 on: Mon May 4 14:42:49 1998; Maspar time 144.53 Seconds
 824.777 Million cell updates/sec
 Tabular output not generated.

Title: >Q06584
 Description: (1-1033) from n-geneseq.seq
 Perfect Score: 1033
 N.A. Sequence: 1 attccggccgcgcgtccccc.....aacctcattccgcgaattc 1033
 Comp: taagccgcgcgcgcgaaggagg.....ttgtgagtagggccttaag

Scoring table: TABLE default
 Gap 6

Nmatch SMD : Dbase 0; Query 0

Searched: 159651 segs, 57698962 bases x 2

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: n-geneseq30
 1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
 14:part14 15:part15 16:part16 17:part17 18:part18
 19:part19 20:part20 21:part21 22:part22 23:part23
 24:part24 25:part25 26:part26 27:part27 28:part28
 29:part29 30:part30 31:part31 32:part32 33:part33

Statistics: Mean 9.064; Variance 6.093; scale 1.488

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	1033	100.0	1033	1	Sequence encoding hum	0.00e+00
2	1031	99.8	1033	13	Human metalloprotein	0.00e+00
3	701	67.9	730	1	Complete sequence of	0.00e+00
4	663	64.2	840	1	TIMP-2 metalloprotein	0.00e+00
5	639	61.9	832	1	TIMP-2 metalloprotein	0.00e+00
6	629	60.9	671	28	Human small tissue in	0.00e+00
7	599	58.0	1045	13	Sequence encoding bov	0.00e+00
8	599	58.0	1045	13	Bovine metalloprotein	0.00e+00
9	288	27.9	302	21	Human gene signature	1.22e-157
10	105	10.2	735	22	Tissue inhibitor of m	7.45e-45
11	103	10.0	675	32	Tissue inhibitor of m	1.15e-43
12	73	7.1	1047	2	Human Natriuretic Pep	3.92e-26
13	69	6.7	1047	2	Human Natriuretic Pep	7.50e-24
14	65	6.3	820	16	TIMP-3 clone Tim3HCM	1.38e-21
15	65	6.3	963	16	TIMP-3 DNA clone Tim	1.38e-21

16	65	6.3	1240	16	T02359	TIMP-3 DNA clone Tim	1.38e-21
17	65 <td>6.3 <td>1276 <td>14 <td>082747</td> <td>Human tissue inhibitor</td> <td>1.38e-21</td> </td></td></td>	6.3 <td>1276 <td>14 <td>082747</td> <td>Human tissue inhibitor</td> <td>1.38e-21</td> </td></td>	1276 <td>14 <td>082747</td> <td>Human tissue inhibitor</td> <td>1.38e-21</td> </td>	14 <td>082747</td> <td>Human tissue inhibitor</td> <td>1.38e-21</td>	082747	Human tissue inhibitor	1.38e-21
18	65 <td>6.3 <td>1285 <td>15 <td>086744</td> <td>TIMP-3 metalloprotein</td> <td>1.38e-21</td> </td></td></td>	6.3 <td>1285 <td>15 <td>086744</td> <td>TIMP-3 metalloprotein</td> <td>1.38e-21</td> </td></td>	1285 <td>15 <td>086744</td> <td>TIMP-3 metalloprotein</td> <td>1.38e-21</td> </td>	15 <td>086744</td> <td>TIMP-3 metalloprotein</td> <td>1.38e-21</td>	086744	TIMP-3 metalloprotein	1.38e-21
19	63 <td>6.1 <td>156</td> <td>1</td> <td>006585</td> <td>Synthetic fragment of</td> <td>1.84e-17</td> </td>	6.1 <td>156</td> <td>1</td> <td>006585</td> <td>Synthetic fragment of</td> <td>1.84e-17</td>	156	1	006585	Synthetic fragment of	1.84e-17
20	57 <td>5.5 <td>916 <td>14</td> <td>082740</td> <td>Mouse tissue inhibitor</td> <td>4.03e-12</td> </td></td>	5.5 <td>916 <td>14</td> <td>082740</td> <td>Mouse tissue inhibitor</td> <td>4.03e-12</td> </td>	916 <td>14</td> <td>082740</td> <td>Mouse tissue inhibitor</td> <td>4.03e-12</td>	14	082740	Mouse tissue inhibitor	4.03e-12
21	48 <td>4.6 <td>51</td> <td>13</td> <td>073094</td> <td>Human metalloprotein</td> <td>3.17e-12</td> </td>	4.6 <td>51</td> <td>13</td> <td>073094</td> <td>Human metalloprotein</td> <td>3.17e-12</td>	51	13	073094	Human metalloprotein	3.17e-12
22	47 <td>4.5 <td>51</td> <td>13</td> <td>073093</td> <td>Human metalloprotein</td> <td>1.09e-11</td> </td>	4.5 <td>51</td> <td>13</td> <td>073093</td> <td>Human metalloprotein</td> <td>1.09e-11</td>	51	13	073093	Human metalloprotein	1.09e-11
23	47 <td>4.5 <td>91</td> <td>9</td> <td>051746</td> <td>Oligonucleotide probe</td> <td>1.09e-11</td> </td>	4.5 <td>91</td> <td>9</td> <td>051746</td> <td>Oligonucleotide probe</td> <td>1.09e-11</td>	91	9	051746	Oligonucleotide probe	1.09e-11
24	46 <td>4.5 <td>128</td> <td>31</td> <td>T76233</td> <td>Human IL6 antisense o</td> <td>3.69e-11</td> </td>	4.5 <td>128</td> <td>31</td> <td>T76233</td> <td>Human IL6 antisense o</td> <td>3.69e-11</td>	128	31	T76233	Human IL6 antisense o	3.69e-11
25	47 <td>4.5 <td>162</td> <td>31</td> <td>T76307</td> <td>Human RANTES antisens</td> <td>1.09e-11</td> </td>	4.5 <td>162</td> <td>31</td> <td>T76307</td> <td>Human RANTES antisens</td> <td>1.09e-11</td>	162	31	T76307	Human RANTES antisens	1.09e-11
26	47 <td>4.5 <td>264</td> <td>31</td> <td>T76445</td> <td>Substance P receptor</td> <td>1.09e-11</td> </td>	4.5 <td>264</td> <td>31</td> <td>T76445</td> <td>Substance P receptor</td> <td>1.09e-11</td>	264	31	T76445	Substance P receptor	1.09e-11
27	47 <td>4.5 <td>188</td> <td>14</td> <td>082741</td> <td>Chicken tissue inhibi</td> <td>1.09e-11</td> </td>	4.5 <td>188</td> <td>14</td> <td>082741</td> <td>Chicken tissue inhibi</td> <td>1.09e-11</td>	188	14	082741	Chicken tissue inhibi	1.09e-11
28	45 <td>4.4</td> <td>142</td> <td>31</td> <td>T76143</td> <td>Human interleukin 1</td> <td>1.25e-10</td>	4.4	142	31	T76143	Human interleukin 1	1.25e-10
29	43 <td>4.2</td> <td>91</td> <td>9</td> <td>051746</td> <td>Oligonucleotide probe</td> <td>1.40e-09</td>	4.2	91	9	051746	Oligonucleotide probe	1.40e-09
30	43 <td>4.2</td> <td>172</td> <td>32</td> <td>T76363</td> <td>Human interleukin 8 a</td> <td>1.40e-09</td>	4.2	172	32	T76363	Human interleukin 8 a	1.40e-09
31	43 <td>4.2</td> <td>204</td> <td>1</td> <td>N81164</td> <td>Base substituted E.co</td> <td>1.40e-09</td>	4.2	204	1	N81164	Base substituted E.co	1.40e-09
32	43 <td>4.2</td> <td>317</td> <td>31</td> <td>T76274</td> <td>Human neutrophil elas</td> <td>1.40e-09</td>	4.2	317	31	T76274	Human neutrophil elas	1.40e-09
33	42	4.1	51	13	073092	Human metalloprotein	4.64e-09
34	42	4.1	178	31	T76405	Human endothelin-1 an	4.64e-09
35	42	4.1	178	31	T76405	Human endothelin-1 an	4.64e-09
36	41	4.0	190	31	T76452	Chymase antisense o	1.53e-08
37	41	4.0	317	31	T76274	Human neutrophil elas	5.01e-08
38	40	3.9	114	12	070467	Generic DNA sequence	5.01e-08
39	40	3.9	114	12	070467	Generic DNA sequence	5.01e-08
40	39	3.8	88	31	T76170	Human IL3 receptor an	1.63e-07
41	38	3.7	114	12	070468	Generic DNA sequence	5.24e-07
42	38	3.7	114	12	070468	Generic DNA sequence	5.24e-07
43	38	3.7	114	12	070465	Generic DNA sequence	5.24e-07
44	38	3.7	147	31	T76294	Human defensin 1 anti	5.24e-07
45	38	3.7	200	31	T76398	Human leukotriene C4	5.24e-07

ALIGNMENTS

RESULT 1
 ID 006584 standard; DNA; 1033 BP.
 AC 006584;
 DT 21-FEB-1991 (first entry)
 DE Sequence encoding human metalloproteinase inhibitor.
 KW Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;
 OS scleroderma; cholesteatoma; ds.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT CDS 253..912
 FT /tag- a
 FT /tag- b
 FT /tag- b
 FT mat_peptide 331..912
 FT EP-398753-A.
 PD 22-NOV-1990.
 PF 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PA (CHIL-) CHILDREN'S HOSPITAL OF LA.
 PI Langley KE, Boone TC, Declercq VA.
 DR WP1-80-350481/47.
 DR P-PSDB; R07955.
 PT New metallo-proteinase inhibitor polypeptide(s) - and DNA
 PT encoding them, for treatment of tumour cell dissemination and
 PT rheumatoid arthritis
 PS Claim 12; Fig 2; 63pp; English.
 PS Sequence may be used to transform a prokaryotic or eukaryotic
 PS expression system to give a product with all the biological
 PS properties of naturally occurring metalloproteinase inhibitor.
 PS The product has therapeutic use in inhibiting tumour dissemination
 PS during chemotherapy and radiation therapy, impured bone marrow cell
 PS harvesting etc. The inhibitor may also be useful in encapsulating
 PS tumours aiding clean excision, and in treatment of emphysema, Paget's
 PS disease, osteoporosis, scleroderma and bedsores.
 PS The gene product also has application in autoimmune disorders eg.
 PS rheumatoid arthritis and multiple sclerosis.
 PS See also Q06583.
 CC Sequence 1033 BP; 215 A; 361 C; 305 G; 152 T;

[illegible][illegible]

QY	421	tcttgaaagacatttatgtgcacccctatcaagaagagatccagttatgagatcaagcagta	480
Db	481	aagatgttcaaaagggccttgagaagaatataagattatctatcacagcccccctctcgga	540
QY	481	aagatgttcaaaagggccttgagaagaatataagattatctatcacagcccccctctcgga	540
Db	541	gtgctgtgaggtctgcctcgagacgtttgaaagaagaagaatattctatctgaggaagacc	600
QY	541	gtgctgtgaggtctgcctcgagacgtttgaaagaagaagaatattctatctgaggaagacc	600
Db	601	gaaggaggacgcaagaatgcatcatcacccctctgtgacttattctgtcccttggaaccctg	660
QY	601	gaaggaggacgcaagaatgcatcatcacccctctgtgacttattctgtcccttggaaccctg	660
Db	661	agcacaccacagaagaagagcctgaaaccacaaggtaccagaatggtctgagatgcaagac	720
QY	661	agcacaccacagaagaagagcctgaaaccacaaggtaccagaatggtctgagatgcaagac	720
Db	721	acggcgctgcggccctatgaccccggtgctatctctcccccggagaagtgcctctgagtgc	780
QY	721	acggcgctgcggccctatgaccccggtgctatctctcccccggagaagtgcctctgagtgc	780
Db	781	tgtgtccacagaagaagatcatcacacgggacacagggccaagtctctgcctgcatacaaga	840
QY	781	tgtgtccacagaagaagatcatcacacgggacacagggccaagtctctgcctgcatacaaga	840
Db	841	agtgacagcgtcctctgtgctgtgtatcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc	900
QY	841	agtgacagcgtcctctgtgctgtgtatcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc	900
Db	901	atcgaaagacccatgaagagcgtctcaaacgcgcctctgtgcccactgcaaaaaaagctcca	960
QY	901	atcgaaagacccatgaagagcgtctcaaacgcgcctctgtgcccactgcaaaaaaagctcca	960
Db	961	agggttcgcagctgtgtccagctctgaaatccctctcctcggaagaacgatataaacactc	1020
QY	961	agggttcgcagctgtgtccagctctgaaatccctctcctcggaagaacgatataaacactc	1020
Db	1021	atcccccggaattc 1033	
QY	1021	atcccccggaattc 1033	
RESULT	3		
ID	005940	standard; DNA; 730 BP.	
AC	005940;		
DT	16-JAN-1991	(first entry)	
	Complete sequence of human TIMP-2 from clone pSS38.		
	Matrix metalloproteinase inhibitor; TIMP-2; pSS38; ss.		
	Synthetic.		
~			
FH		Location/Qualifiers	
FT	Key		
FT	CDS	18..602	
FT	/*tag- a		
FT	/product=complete human TIMP-2		
FT	polya_site	695..700	
FT	/*tag- b		
FT	/note="putative"		
PD	US7494796-A.		
PD	21-AUG-1990.		
PF	13-MAR-1989; 494796.		
PF	21-MAR-1989; US-326334.		
PR	17-JUL-1989; US-380431.		
PR	18-AUG-1989; US-395453.		
PR	13-MAR-1990; US-494796.		
PA	(USSH) NAT. INSTR. OF HEALTH.		
PI	Steenker-Sevenson Wg, Liotta JA, Kruttsch HC;		
DR	WPI, 80-29097/78.		
DR	P-PSDB; R06898.		
PT	New matrix metallo-proteinase inhibitor - used to treat diseases		
PT	resulting from matrix metallo-proteinase activity and in		
PT	diagnosis; detection and purificn..		
PT	Disclosure; Fig 7; 54pp; English.		
CC	TIMP-2 was isolated from human melanoma cell-conditioned media and		

[illegible]

FF	Key	Location/Qualifiers
FT	CDS	152..712
ET	/*tag=	a
PT	/product=	part of TIMP-2
FN	US/494796-A.	
PD	21-AUG-1990.	
PR	13-MAR-1990.	494796.
PR	21-MAR-1989.	US-326334.
PR	17-JUL-1989.	US-380431.
PR	18-AUG-1989.	US-395453.
PA	13-MAR-1990.	US-494796.
PI	(USSH) NAT INST OF HEALTH.	
PI	Stetler-Sevenson WC, Liotta LA, Krutzsch HC;	
DR	WPI: 90-290097/38.	
DR	P-PSDB: R06896.	
PT	New matrix metallo-proteinase inhibitor - used to treat diseases	
PT	resulting from matrix metallo-proteinase activity and in	
PT	diagnosis, detection and purific..	
PS	Disclosure: Fig 6A: 54pp: English.	
CC	TIMP-2 was isolated from human melanoma cell-conditioned media and	
CC	the amino acid sequence determined. A probe was synthesised	
CC	based upon the protein sequence information. It was used to screen	
CC	a Lambdaem-4 cDNA library prepared from human melanoma cells. 239.	
CC	positives were identified from a total of 750,000 plaques screened.	
CC	Further analysis and screening with additional probes eliminated	
CC	all but two clones (pSS15 and pSS18). Both were sequenced and found	
CC	to encode CSC-21K (=TIMP-2), a novel metalloproteinase inhibitor.	
CC	See also US/317407 and WO9010228.	
CC	See also Q05337, R06746-R06750, R06894-R06895 and Q05939-Q05940.	
SO	Sequence 840 BP; 209 A; 235 C; 218 G; 177 T;	
Query Match	64.2%; Score 663; DB 1; Length 840;	
Best Local Similarity	99.0%; Pred. No. 0.00e+00;	
Matches 680; Conservative	0; Mismatches 5; Indels 2; Gaps 2;	
Db	136 ctccgggagagagcgtgcacagcgcgcttttgtaatgcagatgtatgtatcgggccaagc	195
2y		
339 ctcccgggtgcacccgcgcacagcgcttctgcatagcagatgtatgtatcgggccaagc	398	
Db	196 ggtcagtgagagaagaaagtgcagctcttgaaagacattatgcaacccctatcaagagat	255
2y		
399 ggtcagtgagagaagaaagtgcagctcttgaaagacattatgcaacccctatcaagagat	458	
Db	256 ccagatgcagatacaagacagataaagatgtttcaaaaggccctgcagaaagataatagattat	315
2y		
459 ccagatgcagatacaagacagataaagatgtttcaaaaggccctgcagaaagataatagattat	518	
Db	316 cttaacggccccccctccctcgcgagtggttggtgtctgcctgcagcttgagaaagaaagaa	375
2y		
519 cttaacggccccccctccctcgcgagtggttggtgtctgcctgcagcttgagaaagaaagaa	578	
Db	376 ataccatttcagaaagagcccgaggggagagcaggaatcacatcacctctgtgacct	435
2y		
579 ataccatttcagaaagagcccgaggggagagcaggaatcacatcacctctgtgacct	638	
Db	436 catcgtgcctctgggaacacccctgcagacacacccagaaagaagcctgcagaccagatca	495
2y		
639 catcgtgcctctgggaacacccctgcagacacacccagaaagaagcctgcagaccagatca	658	
Db	496 gatgggctgcgagtgcaagatcacgcgcgtgcccatgatacccggtgtacatctctccc	555
2y		
699 gatgggctgcgagtgcaagatcacgcgcgtgcccatgatacccggtgtacatctctccc	758	
Db	556 ggaagagtgccctctgcagatcctggtgcacaaagaaagaaatacaagggagacaggccaa	615
2y		
759 ggaagagtgccctctgcagatcctggtgcacaaagaaagaaatacaagggagacaggccaa	818	
Db	616 gtcttcgcctgcatacaagaagaatgcagcgtcctctgtgcgtgtgtatccggcgcgcc	675
2y		
819 gtcttcgcctgcatacaagaagaatgcagcgtcctctgtgcgtgtgtatccggcgcgcc	878	
Db	676 ccccaagcaggagttcttcgacatcgagaagaccataagcaggcctccaagccctgttg	735
2y		

QY	879	cccaagcaggaggttttcgcgcacatcgaggaccataagcagcgtctccaagccctctg	938
Db	736	ccaactgcaaaaaaacgctcccaagggtttcgac-ggtccagctctgcacatccctctg	794
QY	939	ccaactgcaaaaaaacgctcccaagggtttcgactgtcagctctgcacatccctctg	998
Db	795	aaacgcatgaataa-cactcatccc	820
QY	999	aaacgcatgaataaactcatccc	1025
RESULT 5			
ID	005939	standard; DNA; 832 BP.	
AC	005939:		
DT	16-JAN-1991	(first entry)	
DE	TMF-2 metalloproteinase inhibitor-encoding clone pSS18.		
KW	matrix metalloproteinase inhibitor; TMF-2; pSS18; ss.		
OS	Synthetic.		
FM	Key		
FT	CDS	Location/Qualifiers	
FT		170..703	
FT	/*tag- a		
FT	/product-part of TMF-2		
PN	US7494796-A.		
PD	21-AUG-1990.		
PF	13-MAR-1980; 494796		
PR	21-MAR-1989; US-326334.		
PR	17-JUL-1989; US-380431.		
PR	18-AUG-1989; US-395453.		
PR	13-MAR-1990; US-494796.		
PA	(USSH) NAT INST OF HEALTH.		
PI	Stettler-Sevenson WG, Liotta LA, Krutzsch HC;		
PI	WPI; 90-280097/38.		
DR	P-PSDB; R06897.		
PT	New matrix metallo-proteinase inhibitor - used to treat diseases		
PT	resulting from matrix metallo-proteinase activity and in		
PT	diagnosis, detection and purificn..		
PS	Discloser; Fig 6B; 54pp; English.		
CC	TMF-2 was isolated from human melanoma cell-conditioned media and		
CC	the amino acid sequence determined. A probe was synthesised		
CC	based upon the protein sequence information. It was used to screen		
CC	a lambda/gem-4 cDNA library prepared from human melanoma cells. 239		
CC	positives were identified from a total of 750,000 plaques screened.		
CC	Further analysis and screening with additional probes eliminated		
CC	all but two clones (pSS15 and pSS18). Both were sequenced and found		
CC	to encode CSC-21K (-TMF-2), a novel metalloproteinase inhibitor.		
CC	See also US7317407 and WO9010228.		
CC	See also Q05937, R06746-R06750, R06894-R06895, Q05938 and Q05940.		
SQ	Sequence 832 BP; 201 A; 247 C; 222 G; 162 T;		
Query Match 61.9%; Score 639; DB 1; Length 832;			
Best Local Similarity 99.7%; Pred. No. 0.00e+00;			
Matches 646; Conservative 0; Mismatches 1; Indels 1; Gaps 1;			
Db	166	tgcagtgatcagggccaagcgcgtcagtgaggaagatgagcttgcgaacgacattta	225
QY	378	tgtagtgatcagggccaagcgcgtcagtgaggaagatgagcttgcgaacgacattta	437
Db	226	tggaacccctatcaagggatccagttgatgcatcaagcagataaagatgttcaaaagggc	285
QY	438	tggaacccctatcaagggatccagttgatgcatcaagcagataaagatgttcaaaagggc	497
Db	286	tggaagagataaagtttatacacaagggccctctctggcagctgtgtgggttcgct	345
QY	498	tggaagagataaagtttatacacaagggccctctctggcagctgtgtgggttcgct	557
Db	346	ggaagcttggaagaaagaagataatctcatcttcaggaagaaagccgagggagcgaagat	405
QY	558	ggaagcttggaagaaagaagataatctcatcttcaggaagaaagccgagggagcgaagat	617
Db	406	gcaatcaacctctgtgaacttcacgtgtgccctggagacacccctgagcaaccacagaaga	465
QY	618	gcaatcaacctctgtgaacttcacgtgtgccctggagacacccctgagcaaccacagaaga	677

[illegible]

TEST	RESULT
6	6

90	Sequence	671 BP;	177 A;	184 C;	196 G;	114 T;
PT	tumour					
PT	Claim 1; Page 5; 5pp; Japanese.					
PS	The present sequence is that of the human small tissue inhibitor					
CC	metalloprotease 2 (TIMP2) DNA. Expression of this sequence is					
CC	negatively correlated with brain tumour malignancy, i.e. relative					
CC	expression levels are: normal brain tissue > astrocytoma >					
CC	anaplastic astrocytoma > glioblastoma. By determining the level of					
CC	TIMP 2 expression in human brain tissue, the malignancy of cerebral					
CC	tumours can be evaluated.					
PD	07-JAN-1997.					
PN	07-JUN-1995.					
PN	22-JUN-1995; 156307.					
PF	22-JUN-1995; JP-156307.					
PA	(EISA) EISA CO LTD.					
PR	WPI: 97-112848/11.					
DR	New human small tissue inhibitor metallo:protease 2 gene - used in					
PT	the detection of cancer, and to inspect malignancy of cerebral					
PT	tumour					
AC	T64341: standard; cDNA to mRNA; 671 BP.					
AD	T64341:					
DE	21-MAY-1997 (first entry)					
DE	Human small tissue inhibitor metalloprotease 2 gene.					
DE	Human; small tissue inhibitor metalloprotease; TIMP-2; cancer;					
RW	brain tumour; malignant; diagnosis; ds.					
RW	Homo sapiens.					
OS	009000265-A.					
PN	07-JAN-1997.					
PN	07-JUN-1995.					
PD	22-JUN-1995; 156307.					
PF	22-JUN-1995; JP-156307.					
PA	(EISA) EISA CO LTD.					
PR	WPI: 97-112848/11.					
DR	New human small tissue inhibitor metallo:protease 2 gene - used in					
PT	the detection of cancer, and to inspect malignancy of cerebral					
PT	tumour					

Query Match	60.98;	Score 629;	DB 28;	Length 671;
Best Local Similarity	100.08;	Pred. No. 0.00e+00;		
Matches 629;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;

Accession	Sequence	Length
Db	43 agtgcacagggccaagcgcgtcagtcgaaagaagtcgacctggaacgacattatgg	102
Qy	381 agtgcacagggccaagcgcgtcagtcgaaagaagtcgacctggaacgacattatgg	440
Db	103 caacccttcgaagggatccagttcgatataagcacagataagaattcacaaggcctga	162
Qy	441 caacccttcgaagggatccagttcgatataagcacagataagaattcacaaggcctga	500
Db	163 gaagagataaagttatctactacaagccccctctcgcactgtgtggtgtcgcgtcga	222
Qy	501 gaagagataaagttatctactacaagccccctctcgcactgtgtggtgtcgcgtcga	560
Db	223 cgttgaaagaagaagagatatctccattcgacgaaagacgaaggaggacgacgaatgca	282
Qy	561 cgttgaaagaagaagagatatctccattcgacgaaagacgaaggaggacgacgaatgca	620
Db	283 catcacctctgtgacctcatctcgcccttggaaacaccttgaccacccacgaagaagag	342

[illegible]

RESULT 7

ID	Q06583	standard; cDNA; 1045 BP.
AC	Q06583;	
DE	21-FEB-1991	(first entry)
DT	Sequence encoding bovine metalloproteinase inhibitor.	
KW	Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;	
KW	scleroderma; cholesteatoma; ds.	
OS	Bos taurus.	
FT	Key	Location/Qualifiers
FT	CDS	289..948
FT	/*tag- a	
FT	mat.peptide	367..948
FT	/*tag- b	
PN	EP-396753-A.	
PD	22-NOV-1990.	
PF	18-MAY-1990; 305433.	
PR	19-MAY-1989; US-355027.	
PR	29-MAR-1990; US-501904.	
PA	(AMGE-) AMGEN INC.	
PA	(CHIL-) CHILDREN'S HOSPITAL OF LA.	
PI	Langley KE, Boone TC, Declerck YA;	
DR	WPI; 90-350481/47.	

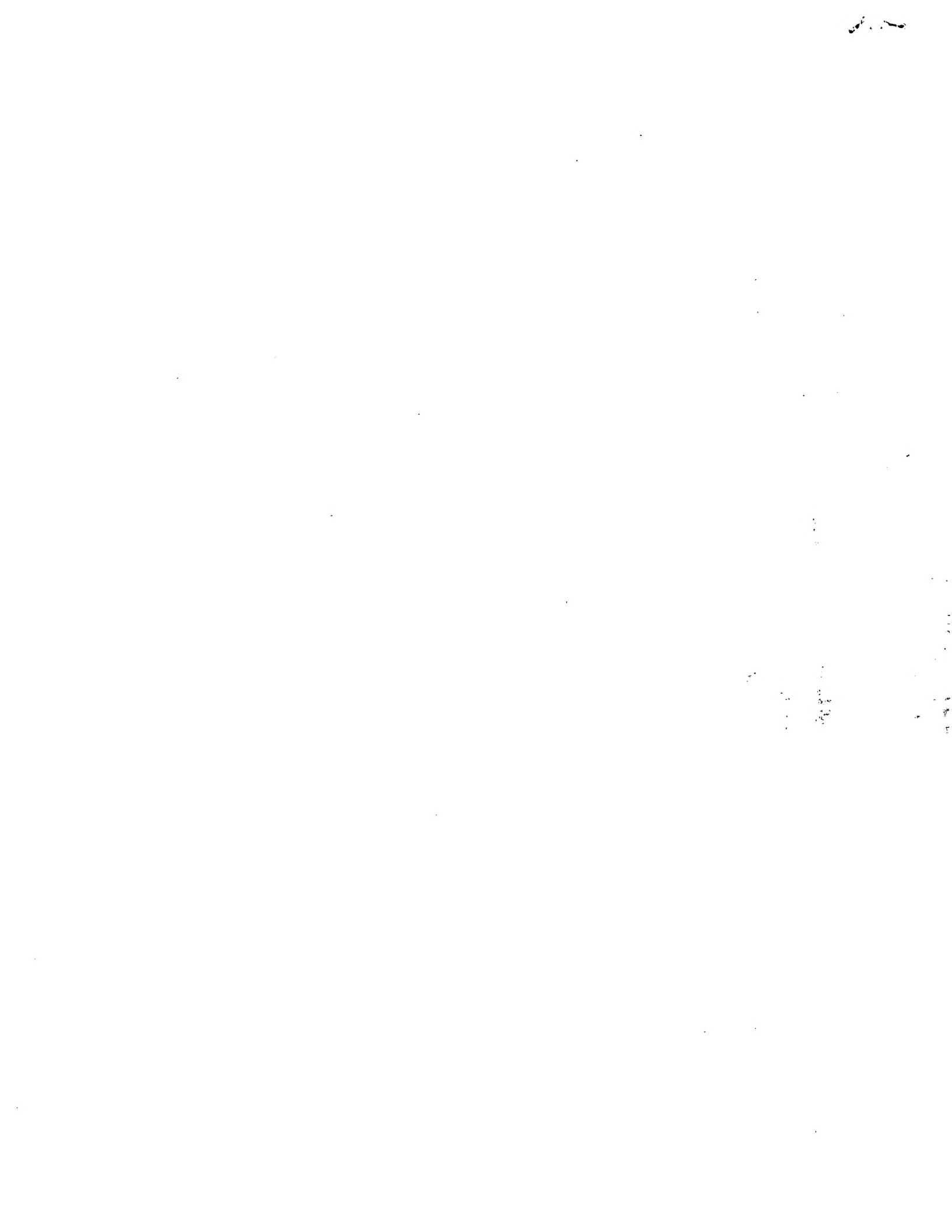
PT New metallo-proteinase inhibitor polypeptide(s) - and DNA
PT encoding them, for treatment of tumour cell dissemination and
PT rheumatoid arthritis
PS Claim 12; Fig 1; 63pp: English.

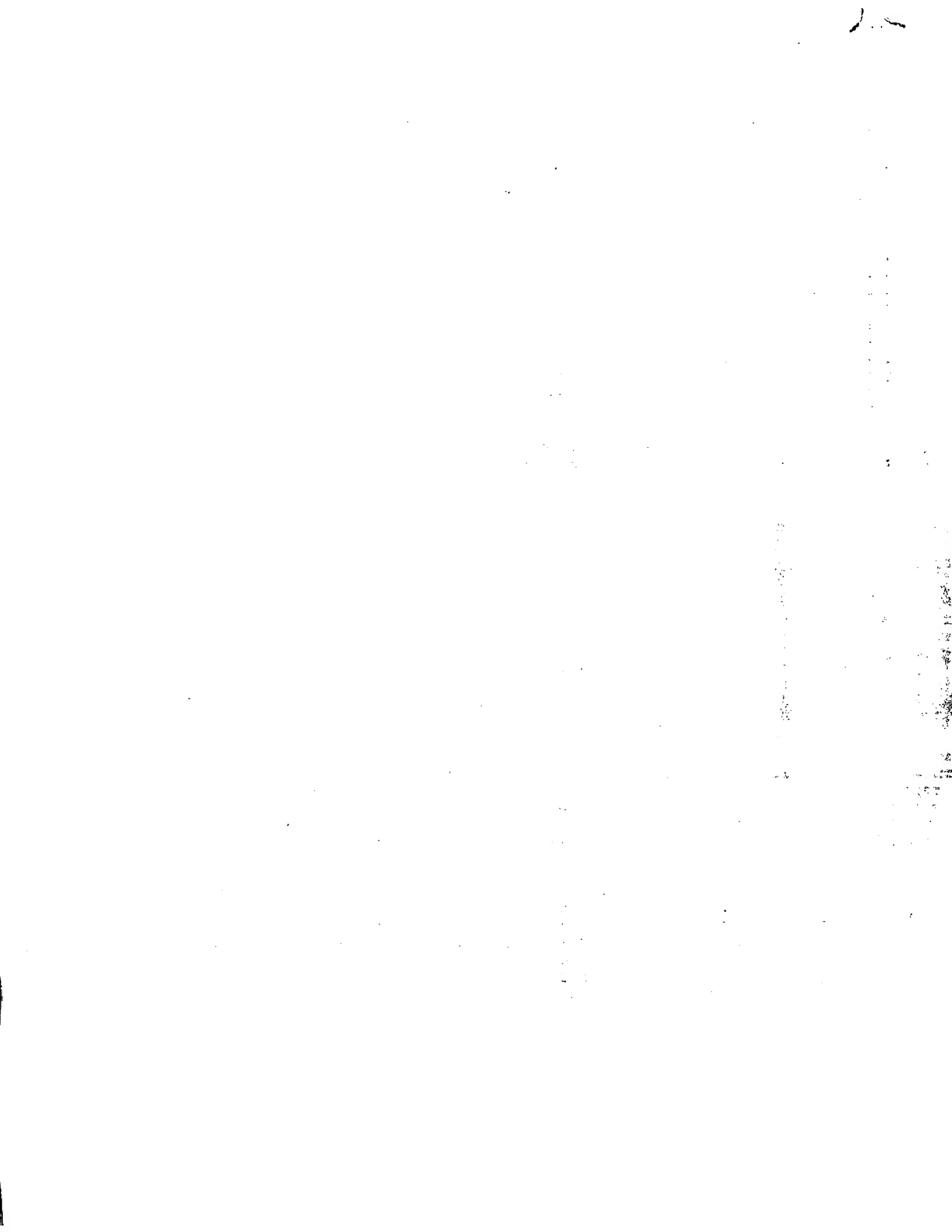
Sequence may be used to transform a procaryotic or eukaryotic expression system to give a product with all the biological properties of naturally occurring metalloproteinase inhibitor. The product has therapeutic use in inhibiting tumour dissemination during chemotherapy and radiation therapy. Impurged bone marrow cell harvesting etc. The inhibitor may also be useful in encapsulating tumours aiding clean excision, and in treatment of emphysema, Paget's disease, osteoporosis, scleroderma and bedsores. The gene product also has application in autoimmune disorders eg. rheumatoid arthritis and multiple sclerosis.

CC See also Q06584.
SQ Sequence 1045 BP; 219 A; 350 C; 311 G; 165 T;

	Query Match	58.0%;	Score 599;	DB 1;	Length 1045;	
	Best Local Similarity	89.6%;	Pred. No. 0.00e+00;			
	Matches 706; Conservative	0;	Mismatches 77;	Indels 5;	Gaps 1	
Ddb	263 ccgcgaccccccccttcgcccgcatatggcgcgcgcgcgcgaagctgcgtgcgtcgt	322				







25;265(36):225701
AU Wilhelm S M; Co...er I E; Marmer B L; Eisen A Z; ...nt G A; Goldberg
G I
CS Division of Dermatology, Washington University School of Medicine,
St. Louis, Missouri 63110.
NC AR 39427 (NIAMS)
AR 12129 (NIAMS)
AR 07284 (NIAMS)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Oct 15) 264 (29)
17213-21.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
OS GENBANK-J05070
EM 199001

L5 ANSWER 3 OF 82 MEDLINE DUPLICATE 3
AN 90046765 MEDLINE
DN 90046765
TI Human 72-kilodalton type IV collagenase forms a complex with a
tissue inhibitor of **metalloproteases** designated
TIMP-2.
AU Goldberg G I; Marmer B L; Grant G A; Eisen A Z; Wilhelm S; He C S
CS Division of Dermatology, Washington University School of Medicine,
Saint Louis, MO 63110.
NC AR 39427 (NIAMS)
AR 12129 (NIAMS)
AR 07284 (NIAMS)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES
OF AMERICA, (1989 Nov) 86 (21) 8207-11.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199002

L5 ANSWER 4 OF 82 MEDLINE DUPLICATE 4
AN 89109210 MEDLINE
DN 89109210
TI Independent regulation of collagenase, 72-kDa progelatinase, and
metalloendoproteinase inhibitor expression in human fibroblasts by
transforming growth factor-beta.
AU Overall C M; Wrana J L; Sodek J
CS Medical Research Council Group in Periodontal Physiology, University
of Toronto, Ontario, Canada.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Jan 25) 264 (3)
1860-9.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Cancer Journals; Priority Journals
EM 198905

L5 ANSWER 5 OF 82 MEDLINE DUPLICATE 5
AN 90037592 MEDLINE
DN 90037592
TI Synovial procollagenase activation by human mast cell tryptase
dependence upon matrix **metalloproteinase** 3 activation.
AU Gruber B L; Marchese M J; Suzuki K; Schwartz L B; Okada Y; Nagase H;
Ramamurthy N S
CS Division of Allergy, Rheumatology and Clinical Immunology, Veterans

Administration, Northport, New York 11768.

NC AR-39189 (NIAMS)
AI-20487 (NIAID)
DEO3987

SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Nov) 84 (5)
1657-62.
Journal code: HS7. ISSN: 0021-9738.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 199002

L5 ANSWER 6 OF 82 MEDLINE
AN 90026246 MEDLINE
DN 90026246
TI Dissociation of tissue inhibitor of metalloproteinases (**TIMP**) from enzyme complexes yields fully active inhibitor.
AU Murphy G; Koklitis P; Carne A F
CS Strangeways Research Laboratory, Cambridge, U.K.
SO BIOCHEMICAL JOURNAL, (1989 Aug 1) 261 (3) 1031-4.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 7 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:416492 BIOSIS
DN BR37:71955
TI EFFECT OF CYTOKINES ON 72KDA METALLOPROTEINASE AND **TIMP** IN GINGIVAL AND PERIODONTAL LIGAMENT FIBROBLASTS.
AU RICHARDS D; HIBBS M S; RUTHERFORD R B
CS UNIV. CONN., FARMINGTON, U.S.A.
SO 67TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH (IADR), 6TH MEETING OF THE IADR IRISH DIVISION, 72ND ANNUAL MEETING OF THE SCANDINAVIAN ASSOCIATION FOR DENTAL RESEARCH AND THE 26TH ANNUAL MEETING OF THE CONTINENTAL EUROPEAN DIVISION OF THE IADR, DUBLIN, IRELAND, JUNE 28-JULY 1, 1989. J DENT RES 68 (SPEC. ISSUE JUNE). 1989. 1019. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 8 OF 82 MEDLINE
AN 89146140 MEDLINE
DN 89146140
TI Antisense RNA-induced reduction in murine **TIMP** levels confers oncogenicity on Swiss 3T3 cells.
AU Khokha R; Waterhouse P; Yagel S; Lala P K; Overall C M; Norton G; Denhardt D T
CS Department of Biochemistry, University of Western Ontario, London, Canada.
SO SCIENCE, (1989 Feb 17) 243 (4893) 947-50.
Journal code: UJ7. ISSN: 0036-8075.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198906

L5 ANSWER 9 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:281751 BIOSIS
DN BR37:6748
TI HUMAN RECOMBINANT TISSUE INHIBITOR OF METALLOPROTEINASE

TIMP INHIBITS NATIVE HUMAN STROMELYSIN IN-VITRO AND IN-VIVO.

AU LARK M W; SAPHOS A; WALAKOVITS L A; MOORE V L
 CS MERCK SHARP AND DOHME RES. LAB., BIOCHEM. MOL. PATHOL., RAHWAY, N.J.
 07065, USA.
 SO 73RD ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR
 EXPERIMENTAL BIOLOGY, NEW ORLEANS, LOUISIANA, USA, MARCH 19-23, 1989.
 FASEB (FED AM SOC EXP BIOL) J 3 (3). 1989. A911. CODEN: FAJOEC ISSN:
 0892-6638
 DT Conference
 LA English

L5 ANSWER 10 OF 82 MEDLINE DUPLICATE 8
 AN 89306621 MEDLINE
 DN 89306621
 TI Genes for extracellular-matrix-degrading **metalloproteinases**
 and their inhibitor, **TIMP**, are expressed during early
 mammalian development.
 AU Brenner C A; Adler R R; Rappolee D A; Pedersen R A; Werb Z
 CS Laboratory of Radiobiology and Environmental Health, University of
 California, San Francisco 94143-0750.
 NC HD 23539 (NICHD)
 HD 23651 (NICHD)
 5 T32 ES07106 (NIEHS)
 SO GENES AND DEVELOPMENT, (1989 Jun) 3 (6) 848-59.
 Journal code: FN3. ISSN: 0890-9369.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198910

L5 ANSWER 11 OF 82 MEDLINE DUPLICATE 9
 AN 90134705 MEDLINE
 DN 90134705
 TI Human mesangial cells secrete a GBM-degrading neutral proteinase and
 a specific inhibitor.
 AU Martin J; Davies M; Thomas G; Lovett D H
 CS Medical Service, San Francisco VAMC-University of California.
 NC R01 DK 39776-01 (NIDDK)
 SO KIDNEY INTERNATIONAL, (1989 Nov) 36 (5) 790-801.
 Journal code: KVB. ISSN: 0085-2538.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199005

L5 ANSWER 12 OF 82 MEDLINE DUPLICATE 10
 AN 89340892 MEDLINE
 DN 89340892
 TI Human osteoblasts in vitro secrete tissue inhibitor of
metalloproteinases and gelatinase but not interstitial
 collagenase as major cellular products.
 AU Rifas L; Halstead L R; Peck W A; Avioli L V; Welgus H G
 CS Department of Medicine, Jewish Hospital, Washington University
 Medical Center, St. Louis, Missouri 63110.
 NC AR-32087 (NIAMS)
 AM-35805 (NIADDK)
 AR-19855 (NIAMS)
 +
 SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Aug) 84 (2)
 686-94.
 Journal code: HS7. ISSN: 0021-9738.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198911

L5 ANSWER 13 OF 82 MEDLINE DUPLICATE 11
AN 89340891 MEDLINE
DN 89340891
TI Evidence for **metalloproteinase** and
metalloproteinase inhibitor imbalance in human
osteoarthritic cartilage.
AU Dean D D; Martel-Pelletier J; Pelletier J P; Howell D S; Woessner J
F Jr
CS Department of Biochemistry & Molecular Biology, University of Miami
School of Medicine, Florida 33101.
NC AR-16940 (NIAMS)
AR-08662 (NIAMS)
SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Aug) 84 (2)
678-85.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198911

L5 ANSWER 14 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:329695 BIOSIS
DN BR37:32467
TI TRANSCRIPTIONAL CONTROL OF COLLAGENASE AND **TIMP** PRODUCTION
BY THE HUMAN MONOCYTIC CELL LINE U937.
AU SHAPIRO S D; PARKS W C; LEY T J; KAHN A J; PARTRIDGE N; CAMPBELL E J;
WELGUS H G
CS JEWISH HOSP. AT WASHINGTON UNIV. MED. CENT., ST. LOUIS, MO., USA.
SO JOINT MEETING OF THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY, EUROPEAN
SOCIETY FOR DERMATOLOGIC RESEARCH, AND JAPANESE SOCIETY FOR
INVESTIGATIVE DERMATOLOGY, WASHINGTON, D.C., USA, APRIL 26-30, 1989.
CLIN RES 37 (2). 1989. 672A. CODEN: CLREAS ISSN: 0009-9279
DT Conference
LA English

L5 ANSWER 15 OF 82 MEDLINE DUPLICATE 12
AN 90126366 MEDLINE
DN 90126366
TI Developmental expression of tissue inhibitor of
metalloproteinase (TIMP) RNA.
AU Nomura S; Hogan B L; Wills A J; Heath J K; Edwards D R
CS Department of Cell Biology, Vanderbilt University Medical School,
Nashville, Tennessee 37232.
SO DEVELOPMENT, (1989 Mar) 105 (3) 575-83.
Journal code: ECW. ISSN: 0950-1991.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 16 OF 82 MEDLINE DUPLICATE 13
AN 89206748 MEDLINE
DN 89206748
TI Characterization of gelatinase from pig polymorphonuclear
leucocytes. A **metalloproteinase** resembling tumour type IV
collagenase.
AU Murphy G; Ward R; Hembry R M; Reynolds J J; Kuhn K; Tryggvason K
CS Cell Physiology Department, Strangeways Research Laboratory,
Cambridge, U.K.

SO BIOCHEMICAL JOURNAL, (1989 Mar 1) 258 (2) 463-72.
 Journal code: 9 ISSN: 0264-6021.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; Cancer Journals
 EM 198907

L5 ANSWER 17 OF 82 MEDLINE DUPLICATE 14
 AN 90093743 MEDLINE
 DN 90093743
 TI Matrix **metalloproteinases** and tissue inhibitor of
metalloproteinases: a review of their role in tumorigenesis
 and tissue invasion.
 AU Khokha R; Denhardt D T
 CS Cancer Research Laboratory, University of Western Ontario, London,
 Canada.
 SO INVASION AND METASTASIS, (1989) 9 (6) 391-405. Ref: 72
 Journal code: GV4. ISSN: 0251-1789.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals; Cancer Journals
 EM 199004

L5 ANSWER 18 OF 82 MEDLINE DUPLICATE 15
 AN 90022890 MEDLINE
 DN 90022890
 TI Systemic administration of **TIMP** in the treatment of
 collagen-induced arthritis in mice.
 AU Carmichael D F; Stricklin G P; Stuart J M
 CS Synergen Inc., Boulder, CO 80301.
 SO AGENTS AND ACTIONS, (1989 Jun) 27 (3-4) 378-9.
 Journal code: 2XZ. ISSN: 0065-4299.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199001

L5 ANSWER 19 OF 82 MEDLINE DUPLICATE 16
 AN 89275215 MEDLINE
 DN 89275215
 TI The role of plasminogen in cell-mediated collagen degradation.
 AU Gavrilovic J; Murphy G
 CS Cell Physiology Department, Strangeways Research Laboratory,
 Cambridge, U.K.
 SO CELL BIOLOGY INTERNATIONAL REPORTS, (1989 Apr) 13 (4)
 367-75.
 Journal code: CRC. ISSN: 0309-1651.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198909

L5 ANSWER 20 OF 82 MEDLINE DUPLICATE 17
 AN 90136309 MEDLINE
 DN 90136309
 TI Association of collagenase and tissue inhibitor of
metalloproteinases (TIMP) with hypertrophic cell
 enlargement in the growth plate.
 AU Dean D D; Muniz O E; Howell D S

CS Arthritis Research Laboratory, U.S. Veterans Administration Medical
Center, Miami,
NC AR-08662 (NIAMS)
SO MATRIX, (1989 Nov) 9 (5) 366-75.
Journal code: M54. ISSN: 0934-8832.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 21 OF 82 MEDLINE DUPLICATE 18
AN 89230068 MEDLINE
DN 89230068
TI The effect of lipopolysaccharide from bacteroides gingivalis and
muramyl dipeptide on osteoblast collagenase release.
AU Sismey-Durrant H J; Atkinson S J; Hopps R M; Heath J K
CS Department of Oral Pathology, London Hospital Medical College,
England.
SO CALCIFIED TISSUE INTERNATIONAL, (1989 May) 44 (5) 361-3.
Journal code: CGH. ISSN: 0171-967X.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198908

L5 ANSWER 22 OF 82 MEDLINE DUPLICATE 19
AN 89375511 MEDLINE
DN 89375511
TI The enzymatic evaluation of procollagenase and collagenase
inhibitors in crude biological media.
AU Lefebvre V; Vaes G
CS Laboratoire de Chimie Physiologique, Universite de Louvain,
Brussels, Belgium.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1989 Sep 15) 992 (3)
355-61.
Journal code: AOW. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198912

L5 ANSWER 23 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:151284 BIOSIS
DN BR36:73325
TI FORMATION OF NEUTRAL PROTEINASE NP COLLAGEN IV CIV AND TISSUE
INHIBITOR OF **METALLOPROTEINASES TIMP** BY RESTING
AND PROLIFERATING MESANGIAL CELLS MCS IN CULTURE.
AU GROUND J; LOVETT D H; COFFEE M; KASHGARIAN M; STERZEL R B
CS VAMC-YALE UNIV. SCH. MED., NEW HAVEN, CONN.
SO MEETING OF THE AMERICAN SOCIETY OF NEPHROLOGY, SAN ANTONIO, TEXAS,
USA, DECEMBER 11-14, 1988. KIDNEY INT 35 (1). 1989. 348. CODEN:
KDYIA5 ISSN: 0085-2538
LA English

L5 ANSWER 24 OF 82 MEDLINE
AN 90125644 MEDLINE
DN 90125644
TI Transforming growth factor-beta regulation of collagenase, 72
kDa-progelatinase, **TIMP** and PAI-1 expression in rat bone
cell populations and human fibroblasts.
AU Overall C M; Wrana J L; Sodek J
CS Medical Research Council Group in Periodontal Physiology, University

of Toronto, Ontario, Canada.
SO CONNECTIVE TISSUE RESEARCH, (1989) 20 (1-4) 289-
Journal code: DQH. ISSN: 0300-8207.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 25 OF 82 MEDLINE
AN 90014493 MEDLINE
DN 90014493
TI **Metalloproteinases** are not involved in the phagocytosis of collagen fibrils by fibroblasts.
AU Everts V; Hembry R M; Reynolds J J; Beertsen W
CS Laboratory of Histology and Cell Biology, Faculty of Medicine, University of Amsterdam, The Netherlands.
SO MATRIX, (1989 Aug) 9 (4) 266-76.
Journal code: M54. ISSN: 0934-8832.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199001

L5 ANSWER 26 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:244735 BIOSIS
DN BA87:125800
TI REGIONAL LOCALIZATION OF THE **TIMP** GENE ON THE HUMAN X CHROMOSOME EXTENSION OF A CONSERVED SYNTENY AND LINKAGE GROUP ON PROXIMAL XP.
AU WILLIARD H F; DURFY S J; MAHTANI M M; DORKINS H; DAVIES K E; WILLIAMS B R G
CS DEP. MED. GENETICS, UNIV. TORONTO, MED. SCI. BUILDING 4282, TORONTO, ONTARIO M5S 1A8, CANADA.
SO HUM GENET 81 (3). 1989. 235-238. CODEN: HUGEDQ ISSN: 0340-6717
LA English

L5 ANSWER 27 OF 82 MEDLINE
AN 89154429 MEDLINE
DN 89154429
TI Regional localization of the **TIMP** gene on the human X chromosome. Extension of a conserved synteny and linkage group on proximal Xp.
AU Willard H F; Durfy S J; Mahtani M M; Dorkins H; Davies K E; Williams B R
CS Department of Medical Genetics, University of Toronto, Ontario, Canada.
SO HUMAN GENETICS, (1989 Feb) 81 (3) 234-8.
Journal code: GED. ISSN: 0340-6717.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198906

L5 ANSWER 28 OF 82 MEDLINE DUPLICATE 20
AN 89141242 MEDLINE
DN 89141242
TI Neutral **metalloprotease** from tendons.
AU Piening C; Riederer-Henderson M A
CS Department of Orthopaedics, University of Washington, Seattle 98195..
SO JOURNAL OF ORTHOPAEDIC RESEARCH, (1989) 7 (2) 228-34.
Journal code: JIQ. ISSN: 0736-0266.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198906

L5 ANSWER 29 OF 82 MEDLINE
AN 90007512 MEDLINE
DN 90007512
TI Linkage studies of the Wiskott-Aldrich syndrome: polymorphisms at **TIMP** and the X chromosome centromere are informative markers for genetic prediction.
AU Greer W L; Mahtani M M; Kwong P C; Rubin L A; Peacocke M; Willard H F; Siminovitch K A
CS Department of Medicine, Toronto Western Hospital, Ontario, Canada.
SO HUMAN GENETICS, (1989 Oct) 83 (3) 227-30.
Journal code: GED. ISSN: 0340-6717.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 30 OF 82 MEDLINE DUPLICATE 21
AN 89382034 MEDLINE
DN 89382034
TI Gingival fibroblasts degrade type I collagen films when stimulated with tumor necrosis factor and interleukin 1: evidence that breakdown is mediated by **metalloproteinases**.
AU Meikle M C; Atkinson S J; Ward R V; Murphy G; Reynolds J J
SO JOURNAL OF PERIODONTAL RESEARCH, (1989 May) 24 (3) 207-13.
Journal code: JMQ. ISSN: 0022-3484.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals
EM 198912

L5 ANSWER 31 OF 82 MEDLINE DUPLICATE 22
AN 90104231 MEDLINE
DN 90104231
TI Fragments of human fibroblast collagenase. Purification and characterization.
AU Clark I M; Cawston T E
CS Rheumatology Research Unit, Addenbrooke's Hospital, Cambridge, U.K.
SO BIOCHEMICAL JOURNAL, (1989 Oct 1) 263 (1) 201-6.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199004

L5 ANSWER 32 OF 82 MEDLINE DUPLICATE 23
AN 89263367 MEDLINE
DN 89263367
TI [Natural inhibitor of **metalloproteinases**: structural and functional study].
Inhibiteur naturel des **metalloproteinases**: etude structurale et fonctionnelle.
AU Faucher D; Lelièvre Y; Boiziau J; Cornet P; Cartwright T
CS Rhone-Poulenc Sante (CRMA), Site de Recherche de Monts, France.
SO PATHOLOGIE BIOLOGIE, (1989 Mar) 37 (3) 199-205.
Journal code: OSG. ISSN: 0369-8114.
CY France

DT Journal; Article; (JOURNAL ARTICLE)
LA French
FS Priority Journals
EM 198909

L5 ANSWER 33 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:236476 BIOSIS
DN BR36:114960
TI EFFECTS OF RECOMBINANT **TIMP** ON BONE RESORPTION BY ISOLATED
OSTEOCLASTS.
AU SHIMIZU H; SAKAMOTO M; SAKAMOTO S
CS HARV. SCH. DENTAL MED., BOSTON, MASS., USA.
SO 18TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH,
SAN FRANCISCO, CALIFORNIA, USA, MARCH 15-19, 1989. J DENT RES 68
(SPEC. ISSUE). 1989. 193. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 34 OF 82 MEDLINE DUPLICATE 24
AN 90023570 MEDLINE
DN 90023570
TI Increased immunostaining of collagenase and **TIMP** in
eruptive xanthoma.
AU Childers J W; Stricklin G P
CS Section of Dermatology, Medical Service VA Medical Center,
Nashville, TN 37212.
SO AMERICAN JOURNAL OF THE MEDICAL SCIENCES, (1989 Sep) 298
(3) 172-6.
Journal code: 3L2. ISSN: 0002-9629.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199001

L5 ANSWER 35 OF 82 MEDLINE DUPLICATE 25
AN 90005712 MEDLINE
DN 90005712
TI Replicative senescence of human skin fibroblasts correlates with a
loss of regulation and overexpression of collagenase activity.
AU West M D; Pereira-Smith O M; Smith J R
CS Roy M. and Phyllis Gough Huffington Center on Aging, Baylor College
of Medicine, Houston, Texas 77030.
NC AG-04749 (NIA)
AG-05333 (NIA)
POL-AG-07123 (NIA)
SO EXPERIMENTAL CELL RESEARCH, (1989 Sep) 184 (1) 138-47.
Journal code: EPB. ISSN: 0014-4827.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 36 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:38514 BIOSIS
DN BR38:17744
TI **TIMP**-2 COMPLETE PRIMARY STRUCTURE OF A NOVEL MEMBER OF THE
TIMP FAMILY.
AU STETLER-STEVENSON W G; KRUTZSCH H; LIOTTA L A
CS LAB. PATHOL., NATL. CANCER INST., BETHESDA, MD. 20879, USA.
SO TWENTY-NINTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY,
HOUSTON, TEXAS, USA, NOVEMBER 5-9, 1989. J CELL BIOL 109 (4 PART 2).
1989. 136A. CODEN: JCLBA3 ISSN: 0021-9525
DT Conference

LA English

L5 ANSWER 37 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:38512 BIOSIS
DN BR38:17742
TI TRANSCRIPTIONAL CONTROL OF COLLAGENASE AND **TIMP** PRODUCTION
BY THE HUMAN MONOCYTIC CELL LINE U937.
AU SHAPIRO S D; PARKS W C; LEY T J; KAHN A J; PARTRIDGE N; CAMPBELL E J;
WELGUS H G
CS JEWISH HOSP. AT WASHINGTON UNIV. MED. CENT., ST. LOUIS, MO.
SO TWENTY-NINTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY,
HOUSTON, TEXAS, USA, NOVEMBER 5-9, 1989. J CELL BIOL 109 (4 PART 2).
1989. 135A. CODEN: JCLBA3 ISSN: 0021-9525
DT Conference
LA English

L5 ANSWER 38 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:401034 BIOSIS
DN BA88:70459
TI A HIGH MOLECULAR WEIGHT COLLAGENASE INHIBITOR MADE BY RABBIT
CHONDROCYTES IN CELL CULTURE.
AU MORRIS G M
CS DEP. PHARMACOL., STATE UNIV. NEW YORK STONY BROOK, STONY BROOK, N.Y.
11794-8651, USA.
SO MATRIX 9 (2). 1989. 127-134. CODEN: MTRXEH
LA English

L5 ANSWER 39 OF 82 MEDLINE DUPLICATE 26
AN 90057454 MEDLINE
DN 90057454
TI Type I collagen degradation by mouse calvarial osteoblasts
stimulated with 1,25-dihydroxyvitamin D-3: evidence for a
plasminogen-plasmin-**metalloproteinase** activation cascade.
AU Thomson B M; Atkinson S J; McGarrity A M; Hembry R M; Reynolds J J;
Meikle M C
CS Cell Physiology Department, Strangeways Research Laboratory, Worts
Causeway, Cambridge, U.K.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1989 Nov 20) 1014 (2)
125-32.
Journal code: AOW. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199003

L5 ANSWER 40 OF 82 MEDLINE DUPLICATE 27
AN 89292024 MEDLINE
DN 89292024
TI Down-regulation of proteolytic activity in 12-O-tetradecanoyl-
phorbol-13-acetate-induced K562 leukemia cell cultures: depletion of
active urokinase by excess type 1 plasminogen activator inhibitor.
AU Alitalo R; Andersson L C; Tapiovaara H; Sistonen L; Vaheri A;
Stephens R
CS Transplantation Laboratory, University of Helsinki, Finland.
SO JOURNAL OF CELLULAR PHYSIOLOGY, (1989 Jul) 140 (1) 119-30.
Journal code: HNB. ISSN: 0021-9541.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198910

L5 ANSWER 41 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:24704 BIOSIS

DN BA89:11670
TI **METALLOPROTEINASES** ARE NOT INVOLVED IN THE PHAGOCYTOSIS OF
COLLAGEN FIBRILS BY FIBROBLASTS.
AU EVERTS V; HEMBRY R M; REYNOLDS J J; BEERTSEN W
CS LAB. HISTOL. CELL BIOL., ACAD. MED. CENT., MEIBERGDREEF 15, 1105 AZ
AMSTERDAM, NETHERLANDS.
SO MATRIX 9 (4). 1989. 66-76. CODEN: MTRXEH
LA English

L5 ANSWER 42 OF 82 MEDLINE
AN 90107445 MEDLINE
DN 90107445
TI Expression of genes for non-collagenous proteins during embryonic
bone formation.
AU Nomura S; Wills A J; Edwards D R; Heath J K; Hogan B L
CS Department of Cell Biology, Vanderbilt University Medical School,
Nashville, TN 37232.
SO CONNECTIVE TISSUE RESEARCH, (1989) 21 (1-4) 31-5;
discussion 36-9. Ref: 22
Journal code: DQH. ISSN: 0300-8207.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199004

L5 ANSWER 43 OF 82 MEDLINE DUPLICATE 28
AN 88327732 MEDLINE
DN 88327732
TI Inhibition by human recombinant tissue inhibitor of
metalloproteinases of human amnion invasion and lung
colonization by murine B16-F10 melanoma cells.
AU Schultz R M; Silberman S; Persky B; Bajkowski A S; Carmichael D F
CS Department of Biochemistry, Loyola University of Chicago, Stritch
School of Medicine, Maywood, Illinois 60153.
NC CA43305 (NCI)
CA44659 (NCI)
SO CANCER RESEARCH, (1988 Oct 1) 48 (19) 5539-45.
Journal code: CNF. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198812

L5 ANSWER 44 OF 82 MEDLINE DUPLICATE 29
AN 89067507 MEDLINE
DN 89067507
TI Selective up-regulation of human alveolar macrophage collagenase
production by lipopolysaccharide and comparison to collagenase
production by fibroblasts.
AU Cury J D; Campbell E J; Lazarus C J; Albin R J; Welgus H G
CS Department of Medicine, Jewish Hospital, St. Louis, MO 63110.
NC AM35805 (NIADDK)
HL29594 (NHLBI)
5T32-HL07317 (NHLBI)
+
SO JOURNAL OF IMMUNOLOGY, (1988 Dec 15) 141 (12) 4306-12.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198903

L5 ANSWER 45 OF 82 MEDLINE

DUPLICATE 30

AN 89096910 MEDLINE

DN 89096910

TI Presence of transcription regulatory elements within an intron of the virus-inducible murine **TIMP** gene.

AU Coulombe B; Ponton A; Daigneault L; Williams B R; Skup D

CS Institut du Cancer de Montreal, Quebec, Canada.

SO MOLECULAR AND CELLULAR BIOLOGY, (1988 Aug) 8 (8) 3227-34.

Journal code: NGY. ISSN: 0270-7306.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

OS GENBANK-M21162

EM 198904

L5 ANSWER 46 OF 82 MEDLINE

DUPLICATE 31

AN 88222411 MEDLINE

DN 88222411

TI K562 cells produce and respond to human erythroid-potentiating activity.

AU Avalos B R; Kaufman S E; Tomonaga M; Williams R E; Golde D W; Gasson J C

CS Department of Medicine, UCLA School of Medicine.

NC CA30388 (NCI)

CA32737 (NCI)

CA40163 (NCI)

SO BLOOD, (1988 Jun) 71 (6) 1720-5.

Journal code: A8G. ISSN: 0006-4971.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198809

L5 ANSWER 47 OF 82 MEDLINE

DUPLICATE 32

AN 88087284 MEDLINE

DN 88087284

TI In vitro synthesis of the active tissue inhibitor of **metalloproteinases** encoded by a complementary DNA from virus-infected murine fibroblasts.

AU Coulombe B; Skup D

CS Institut du Cancer de Montreal, Quebec, Canada.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1988 Jan 25) 263 (3) 1439-43.

Journal code: HIV. ISSN: 0021-9258.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 198804

L5 ANSWER 48 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS

AN 89:192412 BIOSIS

DN BR36:92861

TI TISSUE INHIBITOR OF **METALLOPROTEINASES** **TIMP** INFLUENCES DEVELOPMENT OF PERI-IMPLANTATION MOUSE EMBRYOS IN CULTURE.

AU BEHRENDTSEN O; ALEXANDER C A; WERB Z

CS LAB. RADIOBIOL. ENVIRON. HEALTH, UNIV. CALIFORNIA, SAN FRANCISCO, CALIF. 94143-0750.

SO JOINT MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY AND THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, SAN FRANCISCO, CALIFORNIA, USA, JANUARY 29-FEBRUARY 2, 1989. J CELL BIOL

107 (6 PART 3). 1988. 604A. CODEN: JCLBA3 ISSN: 0021-9525

DT Conference
LA English

L5 ANSWER 49 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:345119 BIOSIS
DN BR35:39961
TI MODULATION OF THE COLLAGENASE INHIBITOR **TIMP** MESSENGER RNA
LEVELS BY ANTI-SENSE RNA INFLUENCES THE INVASIVENESS OF MOUSE 3T3
CELLS.
AU KHOKHA R; WATERHOUSE P; YAGEL S; LALA P K; NORTON G; DENHARDT D T
CS CANCER RES. LAB., UNIV. WESTERN ONTARIO, LONDON, ONT. N6A5B7 CANADA.
SO 79TH ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH,
NEW ORLEANS, LOUISIANA, USA, MAY 25-28, 1988. PROC AM ASSOC CANCER
RES ANNU MEET 29 (0). 1988. 439. CODEN: PAMREA

DT Conference
LA English

L5 ANSWER 50 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:171617 BIOSIS
DN BR36:82858
TI GENES FOR EXTRACELLULAR MATRIX-DEGRADING **METALLOPROTEINASES**
AND THEIR INHIBITOR **TIMP** FUNCTION DURING EARLY MAMMALIAN
DEVELOPMENT.
AU BRENNER C A; ADLER R R; RAPPOLEC D A; PEDERSEN R A; BEHRENDTSEN O;
WERB Z
CS LAB. RADIOBIOL. ENVIRON. HEALTH, UNIV. CALIFORNIA, SAN FRANCISCO,
CALIF. 94143-0750.
SO JOINT MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY AND THE
AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, SAN
FRANCISCO, CALIFORNIA, USA, JANUARY 29-FEBRUARY 2, 1989. J CELL BIOL
107 (6 PART 3). 1988. 380A. CODEN: JCLBA3 ISSN: 0021-9525

DT Conference
LA English

L5 ANSWER 51 OF 82 MEDLINE
AN 89110656 MEDLINE
DN 89110656
TI Identification of matrix metalloendoproteinase inhibitor (
TIMP) in human parotid and submandibular saliva: partial
purification and characterization.
AU Drouin L; Overall C M; Sodek J
SO JOURNAL OF PERIODONTAL RESEARCH, (1988 Nov) 23 (6) 370-7.
Journal code: JMQ. ISSN: 0022-3484.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals
EM 198905

L5 ANSWER 52 OF 82 MEDLINE
AN 88193653 MEDLINE
DN 88193653
TI Role of collagenase in colonic anastomoses: a reappraisal.
AU Chowcat N L; Savage F J; Hembry R M; Boulos P B
CS Department of Surgery, University College London, UK.
SO BRITISH JOURNAL OF SURGERY, (1988 Apr) 75 (4) 330-4.
Journal code: B34. ISSN: 0007-1323.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198808

L5 ANSWER 53 OF 82 MEDLINE

AN 88271651 MEDLINE
DN 88271651
TI Human recombinant interleukin-1 alpha-mediated stimulation of procollagenase production and suppression of biosynthesis of tissue inhibitor of **metalloproteinases** in rabbit uterine cervical fibroblasts.
AU Ito A; Goshowaki H; Sato T; Mori Y; Yamashita K; Hayakawa T; Nagase H
CS Department of Biochemistry, Tokyo College of Pharmacy, Japan.
NC AR 39189 (NIAMS)
SO FEBS LETTERS, (1988 Jul 18) 234 (2) 326-30.
Journal code: EUH. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198810

L5 ANSWER 54 OF 82 MEDLINE DUPLICATE 33
AN 88115581 MEDLINE
DN 88115581
TI Modulation of fibroblast functions by interleukin 1: increased steady-state accumulation of type I procollagen messenger RNAs and stimulation of other functions but not chemotaxis by human recombinant interleukin 1 alpha and beta.
AU Postlethwaite A E; Raghov R; Stricklin G P; Poppleton H; Seyer J M; Kang A H
CS Department of Medicine, University of Tennessee, Memphis 38163.
NC AM 16506 (NIADDK)
AM 26034 (NIADDK)
SO JOURNAL OF CELL BIOLOGY, (1988 Feb) 106 (2) 311-8.
Journal code: HMV. ISSN: 0021-9525.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198805

L5 ANSWER 55 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:370588 BIOSIS
DN BR35:55201
TI MODULATION OF THE COLLAGENASE INHIBITOR **TIMP** MESSENGER RNA LEVELS BY ANTI-SENSE RNA INFLUENCES THE INVASIVENESS OF MOUSE 3T3 CELLS.
AU KHOKHA R; WATERHOUSE P; YAGEL S; LALA P K; NOTRON G; DENHARDT D T
CS CANCER RES. LAB., UNIV. WEST. ONT., LONDON, ONT., CAN.
SO SYMPOSIUM ON CELLULAR PROTEASES AND CONTROL MECHANISMS HELD AT THE 17TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) MEETING ON MOLECULAR AND CELLULAR BIOLOGY, LAKE TAHOE, CALIFORNIA, USA, FEBRUARY 21-26, 1988. J CELL BIOCHEM SUPPL 0 (12 PART B). 1988. 290. CODEN: JCBSD7
DT Conference
LA English

L5 ANSWER 56 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:238354 BIOSIS
DN BR34:120874
TI IDENTIFICATION AND PURIFICATION OF COLLAGENASE INHIBITOR **TIMP** IN HUMAN PAROTID AND SUBMANDIBULAR SALIVA.
AU DROUIN L; OVERALL C M; SODEK J
CS MED. RES. COUNCIL GROUP PERIODONTAL PHYSIOL., UNIV. TORONTO, TORONTO, ONTARIO, CAN.
SO 66TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH, 17TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, AND 12TH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR

DT Conference
LA English

L5 ANSWER 57 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:238145 BIOSIS
DN BR34:120665
TI POLYCLONAL ANTIBODIES TO 3 SYNTHETIC PEPTIDES DERIVED FROM THE
CONSENSUS SEQUENCE OF **TIMP**.
AU BODDEN M K; BIRKEDAL-HANSEN H
CS UNIV. ALA. SCH. DENT., BIRMINGHAM, ALA.
SO 66TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL
RESEARCH, 17TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL
RESEARCH, AND 12TH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR
DENTAL RESEARCH, MONTREAL, QUEBEC, CANADA, MARCH 9-13, 1988. J DENT
RES 67 (SPEC. ISSUE MAR.). 1988. 210. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 58 OF 82 MEDLINE DUPLICATE 34
AN 89138439 MEDLINE
DN 89138439
TI Multilocus molecular mapping of the mouse X chromosome.
AU Mullins L J; Grant S G; Stephenson D A; Chapman V M
CS Roswell Park Memorial Institute, Molecular and Cellular Biology
Department, Buffalo, New York 14263.
NC GM33160 (NIGMS)
GM24125 (NIGMS)
SO GENOMICS, (1988 Oct) 3 (3) 187-94.
Journal code: GEN. ISSN: 0888-7543.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198906

L5 ANSWER 59 OF 82 MEDLINE
AN 88152211 MEDLINE
DN 88152211
TI Inactivation of tissue inhibitor of **metalloproteinases** by
neutrophil elastase and other serine proteinases.
AU Okada Y; Watanabe S; Nakanishi I; Kishi J; Hayakawa T; Watorek W;
Travis J; Nagase H
CS Department of Pathology, School of Medicine, Kanazawa University,
Japan.
SO FEBS LETTERS, (1988 Feb 29) 229 (1) 157-60.
Journal code: EUH. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198806

L5 ANSWER 60 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:368671 BIOSIS
DN BR35:53284
TI PROFILE OF ACID AND NEUTRAL **METALLOPROTEINASES** IN
OSTEOARTHRITIC OA AND IN CONTROL CARTILAGES COMPARED TO SPECIFIC
TISSUE INHIBITOR OF **METALLOPROTEINASE TIMP**.
AU DEAN D; PELLETIER J-P; MARTEL-PELLETIER J; HOWELL D S; WOESSNER J F
CS V.A. MED. CENT., DEP. MED., UNIV. MIAMI SCH. MED., MIAMI, FLA. 33150.
SO 52ND ANNUAL MEETING OF THE AMERICAN RHEUMATISM ASSOCIATION, HOUSTON,
TEXAS, USA, MAY 23-28, 1988. ARTHRITIS RHEUM 31 (4 SUPPL.). 1988.
S33. CODEN: ARHEAW ISSN: 0004-3591

DT Conference
LA English

L5 ANSWER 61 OF 82 MEDLINE DUPLICATE 35
AN 88058939 MEDLINE
DN 88058939
TI Monocyte procollagenase and tissue inhibitor of
metalloproteinases. Identification, characterization, and
regulation of secretion.
AU Campbell E J; Cury J D; Lazarus C J; Welgus H G
CS Department of Medicine, Jewish Hospital at Washington University
Medical Center, St. Louis, Missouri 63110.
NC HL30341 (NHLBI)
AM35805 (NIADDK)
HL07317 (NHLBI)
+
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1987 Nov 25) 262 (33)
15862-8.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198803

L5 ANSWER 62 OF 82 MEDLINE
AN 87231017 MEDLINE
DN 87231017
TI Assignment of the **TIMP** gene to the murine X-chromosome
using an inter-species cross.
AU Jackson I J; LeCras T D; Docherty A J
SO NUCLEIC ACIDS RESEARCH, (1987 May 26) 15 (10) 4357.
Journal code: O8L. ISSN: 0305-1048.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198709

L5 ANSWER 63 OF 82 MEDLINE DUPLICATE 36
AN 87306864 MEDLINE
DN 87306864
TI Bacterial antigens induce collagenase and prostaglandin E2 synthesis
in human gingival fibroblasts through a primary effect on
circulating mononuclear cells.
AU Heath J K; Atkinson S J; Hembry R M; Reynolds J J; Meikle M C
SO INFECTION AND IMMUNITY, (1987 Sep) 55 (9) 2148-54.
Journal code: GO7. ISSN: 0019-9567.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198712

L5 ANSWER 64 OF 82 MEDLINE DUPLICATE 37
AN 88004396 MEDLINE
DN 88004396
TI Transforming growth factor beta modulates the expression of
collagenase and **metalloproteinase** inhibitor.
AU Edwards D R; Murphy G; Reynolds J J; Whitham S E; Docherty A J;
Angel P; Heath J K
CS Department of Biochemistry, University of Oxford, UK..
SO EMBO JOURNAL, (1987 Jul) 6 (7) 1899-904.
Journal code: EMB. ISSN: 0261-4189.
CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198801

L5 ANSWER 65 OF 82 MEDLINE DUPLICATE 38
AN 87239677 MEDLINE
DN 87239677
TI Human alveolar macrophages secrete an inhibitor of
metalloproteinase elastase.
AU Albin R J; Senior R M; Welgus H G; Connolly N L; Campbell E J
NC HL-29594 (NHLBI)
HL-30341 (NHLBI)
HL-07317 (NHLBI)
+
SO AMERICAN REVIEW OF RESPIRATORY DISEASE, (1987 Jun) 135 (6)
1281-5.
Journal code: 426. ISSN: 0003-0805.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198709

L5 ANSWER 66 OF 82 MEDLINE DUPLICATE 39
AN 88059565 MEDLINE
DN 88059565
TI Regulation of the expression of tissue inhibitor of
metalloproteinases and collagenase by retinoids and
glucocorticoids in human fibroblasts.
AU Clark S D; Kobayashi D K; Welgus H G
CS Department of Medicine, Jewish Hospital, Washington University
Medical Center, St. Louis, Missouri 63110.
NC AM 35805 (NIADDK)
TO-AM 07284 (NIADDK)
AM 01525 (NIADDK)
SO JOURNAL OF CLINICAL INVESTIGATION, (1987 Nov) 80 (5)
1280-8.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198803

L5 ANSWER 67 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:211054 BIOSIS
DN BR34:104064
TI A VIRUS INDUCIBLE ELEMENT CONTAINED WITHIN AN INTRON OF THE MURINE
TISSUE INHIBITOR OF **METALLOPROTEINASES TIMP** GENE.
AU COULOMBE B; PONTON A; WILLIAMS B R G; SKUP D
CS INST. DU CANCER DE MONTREAL, MONTREAL, QUEBEC, CANADA H2L 4M1.
SO 1987 INTERNATIONAL SOCIETY FOR INTERFERON RESEARCH MEETING ON THE
INTERFERON SYSTEM, WASHINGTON, D.C., USA, NOVEMBER 2-6, 1987. J
INTERFERON RES 7 (6). 1987. 749. CODEN: JIREDJ ISSN: 0197-8357
DT Conference
LA English

L5 ANSWER 68 OF 82 MEDLINE DUPLICATE 40
AN 87218524 MEDLINE
DN 87218524
TI Characterization and expression of a murine gene homologous to human
EPA/**TIMP**: a virus-induced gene in the mouse.
AU Gewert D R; Coulombe B; Castellino M; Skup D; Williams B R
SO EMBO JOURNAL, (1987 Mar) 6 (3) 651-7.

Journal code: EMB. ISSN: 0261-4189.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198709

L5 ANSWER 69 OF 82 MEDLINE DUPLICATE 41
AN 88076930 MEDLINE
DN 88076930

TI Degradation of type I collagen films by mouse osteoblasts is stimulated by 1,25 dihydroxyvitamin D3 and inhibited by human recombinant **TIMP** (tissue inhibitor of **metalloproteinases**).

AU Thomson B M; Atkinson S J; Reynolds J J; Meikle M C
CS Cell Physiology, Strangeways Research Laboratory, Worts Causeway, Cambridge.

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1987 Oct 29) 148 (2) 596-602.

Journal code: 9Y8. ISSN: 0006-291X.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198803

L5 ANSWER 70 OF 82 MEDLINE DUPLICATE 42
AN 88105457 MEDLINE
DN 88105457

TI **Metalloproteinases** in endochondral bone formation: appearance of tissue inhibitor-resistant **metalloproteinases**

AU Mikuni-Takagaki Y; Cheng Y S
CS Developmental Biology Laboratory of the Medical Services, Massachusetts General Hospital, Boston 02114.

NC AM-3564 (NIADDK)
HD-19836 (NICHHD)

SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1987 Dec) 259 (2) 576-88.

Journal code: 6SK. ISSN: 0003-9861.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198804

L5 ANSWER 71 OF 82 MEDLINE DUPLICATE 43
AN 88007986 MEDLINE
DN 88007986

TI Tissue inhibitor of **metalloproteinases** (**TIMP**) regulates extracellular type I collagen degradation by chondrocytes and endothelial cells.

AU Gavrilovic J; Hembry R M; Reynolds J J; Murphy G
CS Department of Cell Physiology, Strangeways Research Laboratory, Cambridge, England.

SO JOURNAL OF CELL SCIENCE, (1987 Mar) 87 (Pt 2) 357-62.

Journal code: HNK. ISSN: 0021-9533.

CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198801

L5 ANSWER 72 OF 82 MEDLINE DUPLICATE 44
AN 88025983 MEDLINE

DN 88025983
TI Paired serum and synovial fluid values of alpha₂-macroglobulin and
TIMP in rheumatoid arthritis.
AU Cawston T E; McLaughlin P; Hazleman B L
CS Rheumatology Research Unit, Addenbrooke's Hospital, Cambridge, UK.
SO BRITISH JOURNAL OF RHEUMATOLOGY, (1987 Oct) 26 (5) 354-8.
Journal code: BlT. ISSN: 0263-7103.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198802

L5 ANSWER 73 OF 82 MEDLINE
AN 88075826 MEDLINE
DN 88075826
TI Chromosomal assignment of the gene encoding the human tissue
inhibitor of **metalloproteinases** to Xp11.1-p11.4.
AU Spurr N K; Goodfellow P N; Docherty A J
CS Human Genetic Resources Laboratory, Imperial Cancer Research Fund,
Clare Hall Laboratories, South Mimms, Herts..
SO ANNALS OF HUMAN GENETICS, (1987 Jul) 51 (Pt 3) 189-94.
Journal code: 58C. ISSN: 0003-4800.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198803

L5 ANSWER 74 OF 82 MEDLINE
AN 87311550 MEDLINE
DN 87311550
TI Levels of **metalloproteases** and tissue inhibitor of
metalloproteases in human osteoarthritic cartilage.
AU Dean D D; Azzo W; Martel-Pelletier J; Pelletier J P; Woessner J F Jr
NC AM-16940 (NIADDK)
SO JOURNAL OF RHEUMATOLOGY, (1987 May) 14 Spec No 43-4.
Journal code: JWX. ISSN: 0315-162X.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198712

L5 ANSWER 75 OF 82 MEDLINE
AN 88026847 MEDLINE
DN 88026847
TI Production of a factor by cultured human heart valves that is
immunologically related to interleukin 1.
AU Henney A M; Decker R S
CS Strangeways Research Laboratory, Cambridge, UK..
SO CARDIOVASCULAR RESEARCH, (1987 Jan) 21 (1) 21-7.
Journal code: COR. ISSN: 0008-6363.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198802

L5 ANSWER 76 OF 82 MEDLINE
AN 86230918 MEDLINE
DN 86230918
TI Physiological relevance of erythroid-potentiating activity of
TIMP [letter].
AU Stricklin G P; Welgus H G

SO NATURE, (1986 Jun 5-11) 321 (6070) 628.
Journal code: ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Letter
LA English
FS Cancer Journals; Priority Journals
EM 198609

L5 ANSWER 77 OF 82 MEDLINE
AN 87066797 MEDLINE
DN 87066797
TI RFLP detected by an X-linked cDNA encoding erythroid-potentiating activity/tissue inhibitor of **metalloproteinase** (EPA/**TIMP**).

AU Durfy S J; Clark S C; Williams B R; Willard H F
SO NUCLEIC ACIDS RESEARCH, (1986 Nov 25) 14 (22) 9226.
Journal code: O8L. ISSN: 0305-1048.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198703

L5 ANSWER 78 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:158402 BIOSIS
DN BR32:76529
TI IMMUNOHISTOCHEMICAL LOCALIZATION OF COLLAGENASE AND TISSUE INHIBITOR OF **METALLOPROTEINASES TIMP** IN BRAIN TUMORS.
AU HALAKA A N; ELLIS E; BIRD C C; HEMBRY R M; REYNOLDS J J
CS LEEDS.
SO 108TH MEETING OF THE SOCIETY OF BRITISH NEUROLOGICAL SURGEONS, CAMBRIDGE, ENGLAND, APR. 3-4, 1986. J NEUROL NEUROSURG PSYCHIATRY 49 (11). 1986. 1328. CODEN: JNNPAU ISSN: 0022-3050
DT Conference
LA English

L5 ANSWER 79 OF 82 MEDLINE DUPLICATE 45
AN 87070521 MEDLINE
DN 87070521
TI Tissue inhibitor of **metalloproteinases** and collagenase inhibitory activity in lung secretions from patients with chronic obstructive bronchitis: effect of corticosteroid treatment.
AU Burnett D; Reynolds J J; Ward R V; Afford S C; Stockley R A
SO THORAX, (1986 Oct) 41 (10) 740-5.
Journal code: VQW. ISSN: 0040-6376.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198703

L5 ANSWER 80 OF 82 MEDLINE DUPLICATE 46
AN 87100023 MEDLINE
DN 87100023
TI Rapid purification of tissue inhibitor of **metalloproteinases** from human plasma and identification as a gamma-serum protein.
AU Cawston T E; Noble D N; Murphy G; Smith A J; Woodley C; Hazleman B
SO BIOCHEMICAL JOURNAL, (1986 Sep 15) 238 (3) 677-82.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198704

LS ANSWER 81 OF 82 MEDLINE
AN 87049506 MEDLINE
DN 87049506
TI Immunolocalization of collagenase and tissue inhibitor of
metalloproteinases (TIMP) in hypertrophic scar
tissue.
AU Hembry R M; Ehrlich H P
NC GM 32705 (NIGMS)
GM 21700 (NIGMS)
SO BRITISH JOURNAL OF DERMATOLOGY, (1986 Oct) 115 (4) 409-20.
Journal code: AW0. ISSN: 0007-0963.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198703

LS ANSWER 82 OF 82 MEDLINE
AN 86321251 MEDLINE
DN 86321251
TI Inhibition of production and action of tissue
metalloproteinases.
AU Reynolds J J
SO ANNALES DE BIOLOGIE CLINIQUE, (1986) 44 (2) 188-94. Ref:
69
Journal code: 4ZS. ISSN: 0003-3898.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198612